

IMPERIAL GAZETTEER

BENGAL,

CHOTA NAGPUR DIVISION.



Calcutta:

THE BENGAL SECRETARIAT PRESS.

1907.

CHOTA NAGPUR DIVISION.

CONTENTS.

	PAGE
Chota Nagpur Division	1
Hazaribagh District	3
Boundaries, configuration, and hill and river system	15
Geology	4
Botany	15
Fauna	5
Climate and temperature	15
History	15
Archæology	7
The people	15
Their castes and occupations	8
Christian Missions	15
General agricultural conditions	15
Chief agricultural statistics and principal crops	9
Improvements in agricultural practices	15
Cattle	15
Irrigation	10
Forests	15
Mineral resources	15
Arts and manufactures	13
Commerce and trade	15
Railways and roads	14
Famines	15
District sub-divisions and staff	15
Civil and criminal justice	15
Land revenue	15
Local and municipal government	15
Public health	15
Education	15
Medical	17
Vaccination	15
Bibliography	15

	PAGE.
Hazaribagh District—concluded.	
Hazaribagh Sub-division	17
Giridih Sub-division	18
Chatra	18
Giridih Town	18
Hazaribagh Town	19
Kuluha Hill	19
Kunda	19
Lugu	19
Mahabar	19
Mahudi	19
Pachamba	20
Parasnath	19
Ramgarh	19
Ranchi District	21
Boundaries, configuration and hill and river systems	19
Geology	22
Botany	19
Fauna	23
Climate and temperature	19
History	19
Archæology	25
The people	19
Their castes and occupations...	27
Christian Missions	19
General agricultural conditions	19
Chief agricultural statistics and principal crops	28
Improvements in agricultural practice	19
Cattle	29
Forests	19
Minerals	19
Arts and manufactures	19
Commerce	19
Railways and roads	30
Famine	19
District sub-divisions and staff	19
Civil and criminal justice	31
Land revenue	19
Local and municipal government	32
Police and jails	33
Education	19
Medical	19
Vaccination	19

Ranchi District—concluded.	PAGE.
<i>Bibliography</i> ...	33
Ranchi Sub-division ...	ib
Gumla Sub-division ...	34
Khunti Sub-division ...	ib
Bundu ...	ib
Ohutla ...	ib
Gumla Village ...	ib
Khunti Village ...	35
Lohardaga ...	ib
Marang Buru ...	ib
Palkot ...	ib
Ranchi Town ...	ib
Saru ...	38
Palamau District ...	ib
Boundaries, configuration and hill and river systems ...	ib
Geology ...	37
Botany ...	38
Fauna ...	ib
Climate and temperature ...	39
History ...	ib
The people ...	40
Their castes and occupations ...	41
Christian Missions ...	ib
General agricultural conditions ...	ib
Principal crops ...	ib
Improvements in agricultural practice ...	43
Cattle ...	ib
Irrigation ...	ib
Forests ...	ib
Minerals ...	43
Arts and manufactures ...	ib
Commerce ...	44
Railways and roads ...	ib
Famine ...	ib
Administration ...	ib
Civil and criminal justice ...	ib
Land revenue ...	45
Local and municipal government ...	46
Police and jails ...	ib
Education ...	ib
Medical ...	ib
Vaccination ...	ib

Palamau District—concluded.	PAGE.
<i>Bibliography</i>	46
Daltonganj	46
Garwa	47
Manbhum District	46
Boundaries, configuration, and hill and river systems ...	46
Geology	48
Botany	49
Fauna	46
Climate and temperature	46
History	60
Archæology	61
The people	46
Their castes and occupations	52
Christian Missions	46
General agricultural conditions	46
Chief agricultural statistics and principal crops ...	46
Improvements in agricultural practice	53
Cattle	46
Irrigation	46
Forests	54
Minerals	46
Arts and manufactures	55
Commerce	46
Railways and roads	56
Famines	46
District sub-divisions and staff	46
Civil and criminal justice	67
Land revenue	46
Local and municipal government	58
Police and jails	46
Education	59
Medical	46
Vaccination	46
<i>Bibliography</i>	46
Purulia Sub-division	4
Gobindpur Sub-division	60
Boram	46
Buddhpur	46
—Charra	46
Dalma	61
Dalmi	46
Gobindpur Village	46

	PAGE.
Nanbhum District—concluded.	
Jhalida ...	61
Palma ...	ib
Panchet ...	ib
Purulia Town ...	62
Raghunathpur ...	ib
Singbhum District	ib
Boundaries, configuration and hill and river systems	ib
Geology ...	63
Botany ...	64
Fauna ...	ib
Climate and temperature	ib
History ...	65
Archæology	67
The people	ib
Their castes and occupations	68
Christian Missions	ib
General agricultural conditions	ib
Principal crops	ib
Improvements in agricultural practice	69
Cattle ...	ib
Irrigation	ib
Forests ...	ib
Minerals ...	ib
Manufactures	70
Commerce	ib
Railways and roads	ib
Famine ...	ib
Administration	ib
Civil and criminal justice	ib
Land revenue	71
Local and municipal government	ib
Police and jails	ib
Education	72
Medical ...	ib
Vaccination	ib
<i>Bibliography</i>	ib
Kolhan	ib
Porahat	74
Chalibasa	75
Chakradharpur	ib
Saranda	ib
<i>Cross-references (for Imperial Gazetteer only)</i>	76

CHOTA NAGPUR DIVISION.

Chotā Nāgpur Division.—A Division of Bengal, lying between $21^{\circ} 58'$ and $24^{\circ} 49'$ N., and $83^{\circ} 20'$ and $86^{\circ} 54'$ E. The head-quarters of the Division are at Ranchi, and it includes 5 Districts with area, population and revenue as shown below :—

DISTRICT.			Area in square miles.	Population in 1901.	Demand for land revenue and cesses in 1903-04, in thousands of rupees.
Hazaribāgh	...	...	7,021	1,177,961	2,46
Manikā	...	...	7,128	1,187,925	1,05
Palāmu	...	...	4,914	619,600	1,71
Manikā	...	...	4,147	1,301,864	2,22
Singhbhūm	...	...	3,801	613,579	1,64
TOTAL			27,101	4,900,429	9,68

NOTE.—In the report of the census of 1901 the area of Singhbhūm was shown as 3,753 square miles. The figure given above was supplied by the Surveyor-General.

After the suppression of the Kol rebellion of 1831-32 this tract was exempted by Regulation XIII of 1833 from the operation of the general laws and regulations, and every branch of the administration was vested in an officer appointed by the supreme Government and styled the Agent to the Governor-General, South-West Frontier. In 1854 the designation of the Province was changed to Chotā Nāgpur by Act XX of that year, and it has been administered since that date as a non-regulation Province under the Lieutenant-Governor of Bengal, the title of the chief executive officer being at the same time changed from Governor-General's Agent to Commissioner, and that of officers in charge of Districts from Principal Assistant to the Governor-General's Agent to Deputy Commissioner. The Commissioner also exercises general control over the small Chotā Nāgpur States of Kharsāwān and Sarāikēlā.

The so-called Chotā Nāgpur plateau extends beyond the limits of the Division into the Tributary States of Chotā Nāgpur and Orissa on the south-west and south, and through the Santāl Parganas to the Ganges on the north-east, while its

outlying fringes stretch out into the south of the Patna and Bhāgalpur Divisions on the north and into the west of the Burdwan Division on the east. The word plateau is used, for want of a better designation, for this tract of elevated country, and is not intended to imply that the area referred to forms an open table-land like that to the north of Cape Colony. There are three plateaux in the stricter acceptance of the term, one in Rānchi and two in Hazāribāgh. Elsewhere the country is often very broken, and there are numerous ranges or groups of steep hills intersected by deep ravines and occasionally by open valleys. The geological formation is gneiss, freely interbedded with micaceous, silicious and hornblendic schists, passing into transition or metamorphic rocks in West Bengal and South Bihār.

The recorded population increased from 3,147,699 in 1872 to 4,225,989 in 1881 and to 4,628,792 in 1891, but the earlier enumerations were defective. The density is 181 persons to the square mile, compared with 438 for Bengal as a whole. In 1901 Hindus constituted 68·6 per cent. of the population, Muhammadans 5·7 per cent., Christians (of whom all except 1,191 were natives) 2·9 per cent., and Animists 22·7 per cent., while among the remainder were 853 Jains. The Division is the home of numerous non-Aryan tribes who were never properly subjugated either by the early Aryan invaders or by the Pathān and Mughal emperors, or indeed by any outside power until the advent of the British. They have thus preserved in their mountain fastnesses an individuality in respect of tribal organization, religion and language which their congeners in the plains have long since lost. They are gradually abandoning their tribal dialects in favour of the nearest Aryan form of speech, Hindī to the north and west, Oriyā to the south and Bengālī to the east, but a large number still speak their own languages, which are divided by philologists into two great families, the Munda and the Dravidian. This distinction, however, is merely an indication of some earlier political condition and does not represent any corresponding divergence of physical type. The most distinctive of the tribes represented are the Santāls (see SANTAL PARGANAS) in Hazāribāgh, Mānbhūm and Singbhbūm, the Mundās in Rānchi, the Oraons in Rānchi and the Tributary States, the Hos in Singbhbūm, the Brūmjes in Mānbhūm and Singbhbūm, and the Gonds in the Tributary States. A remarkable increase in the number of Christians took place during the decade ending in 1901, due principally to new conversions in Rānchi, where Christians numbered 124,958 compared with only 75,693 ten years previously. The German Lutheran missionaries have here met with great success, and the District is also a great centre of Roman Catholic missionary enterprise, containing three-fifths of the total number of their converts in Bengal.

The Division contains 13 towns and 23,876 villages. RANCHI (25,970) is the only town with a population exceeding 20,000 inhabitants. Chotā Nāgpur possesses great mineral wealth, especially in respect of coal, the principal fields being the Giridih coal-field in Hazāribāgh, the Jherriā coal-field chiefly in Mānbhūm, and the Daltonganj coal-field in Palāman. The output of coal and coke in 1903 was 3,329,000 tons. Mica is mined in Hazāribāgh, and 547 tons were produced in 1903. The Jain temples at PARASNATH HILL yearly attract thousands of pilgrims; other interesting antiquities are the ruins of a fort at PANCHET and of temples at several places in the Mānbhūm District.

Hazāribāgh District.—North-eastern District of the Chotā Nāgpur Division of Bengal, lying between $23^{\circ} 25'$ and $24^{\circ} 49' N.$, and $84^{\circ} 27'$ and $86^{\circ} 34' E.$, with an area of 7,021 square miles. It is bounded on the north by the Districts of Gayā and Monghyr; on the east by the Santāl Parganas and Mānbhūm; on the south by Rāneilī; and on the west by Palāman.

Boun-
daries,
configu-
ration, hill
and river
system.

Hazāribāgh, which, like the rest of Chotā Nāgpur, consists to a great extent of rock and ravine, lies towards the north-eastern extremity of the chain of high land, sometimes a range of hills and sometimes a cultivated plateau, which extends across the continent of India, south of the Narbadā river on the west and of the Son river on the east. It is divided naturally into three distinct tracts: an undulating plateau, with an average elevation of about 2,000 feet, extends from the west-central boundary of the District measuring about 40 miles in length from east to west and 15 miles from north to south; a lower and more extensive plateau, with a general elevation of 1,300 feet, covers the north and east of the District, gradually sinking towards the east; while the central valley of the Dāmodar river, with the country watered by its numerous feeders, occupies the entire south of the District. The principal peaks of the southern plateau are Barāgai or MARANG BURU (3,445 feet above the sea), Jilingā (3,067 feet), Chendwār (2,816 feet), and Aewa (2,463 feet). Detached hills are LUOU (3,203 feet), MAHUDI (2,437 feet), and in the east of the District, on the boundary of Mānbhūm, the well-known PARASNATH HILL, 4,480 feet above the sea. In the northern plateau is the MAHABAR range, rising to an elevation of 2,210 feet above sea-level. The DāMODAR, which rises in Palāman, is the most important river of Hazāribāgh, through which it flows in an easterly direction for about 90 miles. Its chief feeders in this portion of its course are the Gurni, Habaro, Naikāri, Maramarhā, Bherā, Kanay, Khanjo, and Jamuniā, and with its tributaries it drains in this District an area of 2,840 square miles; it is everywhere fordable during the dry season. The only other important river, the BAKAKAN,

risers on the northern face of the central plateau and flows in an easterly and south-easterly direction till, after draining an area of 2,050 square miles, it leaves the District to form the boundary between Mānbhūm and the Santāl Parganas. The north-west of the District is drained by the Jhikā and Chako, which unite a short distance outside the boundary, by the Mohant, Lilājān and Morhar, which flow northwards into Gayā, and by the Dhādhār, Tilayā and Sakri. The Ajay rises on the eastern boundary of the District, two of its tributaries draining part of the Girīdih sub-division, while on the south the SUBARNAREKHA forms the District boundary for about 15 miles.

Geology.

A description of the geology of Hazāribagh District would practically be a summary of the characters of any Archean area; the old felspathic gneissos, well banded and with the composition of typical igneous rocks, are associated with schistose forms and with the results of the intermingling of ancient sediments with igneous matter. Among these are intrusive masses of granite which, under pressure, have assumed a gneissose structure and, on account of the way in which they stand up as small hills of rounded hummocks, have sometimes been referred to as the "dome gneiss." They rise up in the midst of bands of schist, which are cut in all directions by veins of acid pegmatite. Patches of Gondwāna rocks occur, some of which contain the coal for which the District is well known.*

Botany.

The narrower valleys are often terraced for rice cultivation, and these rice fields and their margins abound in marsh and water plants. The surface of the plateau between the valleys, where level, is often bare and rocky, but where undulating is usually clothed with a dense scrub jungle in which *Decrocalamus strictus* is often prominent. The steep slopes of the ghāts are covered with a dense forest mixed with many climbers. *Sal* (*Shorea robusta*) is gregarious; among the other noteworthy species are species of *Buchanania*, *Senecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, *Adina*, which these forests share with the similar forests on the lower Himālayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Oochlopernum*, *Soyyida*, *Bauellia*, *Hardwickia* and *Bassia*, which do not cross the Gāngetic plain. One of the features of the upper edge of the ghāts is a dwarf palm, *Phoenix acaylis*; striking too is the wealth of scarlet blossom in the hot weather produced by the abundance of *Butea frondosa* and *R. superba*, and the mass of white flower

* The mica deposits of India, by Holland in Mem. Geol. Surv. Ind., vol. xxiv, part II (1903); The igneous rocks of Girīdih and their contact effects, by Holland and Saie in Itcc. Geol. Surv. Ind. vol. xxviii, part IV (1906).

along the ghats in November displayed by the convolvulaceo-climber *Porana paniculata*.

The jungles in the less cultivated tracts give shelter to tigers, bears, leopards and several varieties of deer. Wolves are very common, and wild dogs hunt in packs on Parasnath Hill.

The temperature is moderate except during the hot months of April, May and June, when westerly winds from Central India cause high temperature with very low humidity. The mean temperature increases from 76° in March to 85° in April and May, the mean maximum from 83° in March to 89° in May and the mean minimum from 64° to 76°. During these months humidity is lower in Chota Nagpur than in any other part of Bengal, falling in Hazaribagh to 41 per cent. in March and 36 per cent. in April. In the winter season the mean temperature is 69° and mean minimum 51°. The average annual rainfall is 53 inches, of which 7·6 inches fall in June, 14·1 in July, 13·1 in August and 8·5 in September.

The whole of the Chota Nagpur plateau was known in early history as Jharkand or "the forest tract," and appears never to have been completely subjugated by the Muhammadans. Sanskrit tradition relates that one of their earliest settlements was at Chhat Champā in Hazaribagh and that their fort was taken by Sayyid Ibrahim Ali, a general of Muhammad bin Tughlak, and placed in charge of a Muhammadan officer, *circa* 1310. There is no authentic record, however, of any invasion of the country till Akbar's reign when it was overrun by his general. The Rājā of Chota Nagpur became a tributary of the Mughal government (1585); and in the *Ain-i-Akbari* Chhat Champā was shown as a *pargana* belonging to Bihar assessed to Rs. 15,500, and liable to furnish 20 horses and 600 foot. Subsequently in 1616 the Rājā fell into arrears of tribute; the governor of Bihar invaded his country; and the Rājā was captured and removed to Gwalior. He was released after 12 years on agreeing to pay a yearly tribute of Rs. 8,000, and his country was considered part of the *Sarkar* of Bihar. From the fact that the ancestor of the Rājās of Rāmgarh (which included the present District of Hazaribagh) is said to have received a grant of the estate from these Nāgbansi Rājās, it appears that the District formed part of their dominions. The incursions of the Muhammadans were, however, directed not against the frontier chiefdom of Rāmgarh but against Kokrah, or Chota Nagpur proper, to which they were attracted by the diamonds found in its rivers; and though the Rājās were reduced to the condition of tributaries by the Mughal viceroys of Bengal, they were little interfered with so long as their contributions were paid regularly. Even so late as the reign of Aurangzeb the allegiance of the chiefs of this tract must have been very loose, as the Jharkand route to Bengal

is said to have been little used by troops on account of the savage manners of the mountaineers. About this time the first Rājā of Kundā, who was a personal servant of the emperor, received a rent-free grant of the *pargana* on condition that he guarded 4 passes from the inroads of Marāṭhās, Bargīs, and Pindāris; and in 1765 Chotā Nāgpur was ceded to the British as part of Bihar. The British first came into contact with this tract in 1771 when they intervened in a dispute between one Mukund Singh, the Rājā of Rāmgarh, and his relative Tej Singh, who was at the head of the local army. The latter, who had claims to the estate, went in 1771 to Patna and laid his case before Captain Camao, who undertook to assist him and deputed for the purpose a European force under Lieutenant Goddard. Mukund Singh fled after a mere show of resistance, and the Rāmgarh estate was made over to Tej Singh subject to a tribute of Rs. 40,000 a year. Lieutenant Goddard's expedition did not extend to the Kharakdih *pargana* in the north-west of the District. Six years earlier (1765) Mad Nārāyan Deo, the old Hindu Rājā of Kharakdih, chief of the *ghatwāls* or guardians of the passes, had been driven from his estate by the Musalmān *āmīl* or revenue agent, Kāmdār Khān, who was succeeded by Ikbāl Ali Khān. The latter was expelled in 1774 for tyranny and mismanagement by a British force under Captain James Brown. The exiled Rājā of Kharakdih, who had exerted his influence on the British side, was rewarded with a grant of the maintenance lands of the Rāj. Possibly he might have been completely reinstated in his former position, but in the confusion of Muhammadan misrule the *ghatwāls* had grown too strong to return to their old allegiance, and demanded and obtained separate settlements for the lands under their control. In the *sansad* granted to them by Captain Brown they are recognised as petty feudal chiefs, holding their lands subject to responsibility for crime committed on their estates. They were bound to produce criminals, and to refund stolen property; they were liable to removal for misconduct and they undertook to maintain a body of police, and to keep the roads in repair.

In 1780 Rāmgarh and Kharakdih formed part of a British District named RĀMGARH, administered by a civilian, who held the offices of Judge, Magistrate and Collector; while a contingent of native infantry, known as the Rāmgarh battalion, was stationed at Hazaribāgh, under the command of a European officer. This District was dismembered after the Kol insurrection of 1831-32, when under regulation XIII of 1833 parts of it were transferred to the surrounding Districts, and the remainder, including the *parganas* of Kharakdih, Kendi and Kundā, with the large estate of Rāmgarh consisting of 16 *parganas*, which compose the present area of the District, were formed into a District under the name of

Hazaribagh. In 1854 the title of the officer in charge of the District was changed from Principal Assistant to the Governor-General's Agent to Deputy Commissioner.

The most important archaeological remains are the Jain temples at Parasnāth. Buddhist and Jain remains exist on KULUHA HILL in Dantāra pargana, and a temple and tank to the west of the hill dedicated to Kuleswari, the goddess of the hill, are visited by Hindu pilgrims in considerable numbers. The only other remains worthy of mention are 4 rock temples on MANUHI hill, one of which bears the date 1740 Samvat, ruins of temples at Sātga-wan, and an old fort which occupies a strong defensive position at KUNDA. Archaeology.

At the census of 1872 the population recorded in the present District area was 771,875. The enumeration was, however, defective, and the census of 1881 showed a population of 1,104,742, which rose to 1,164,321 in 1891 and to 1,177,901 in 1901. The smallness of the increase in the last decade is attributable to the growing volume of emigration to Assam and elsewhere, and to the heavy death-rate following the famine of 1897, chiefly from fever and cholera, which are always the most prevalent causes of mortality in the District. The salient statistics of the census of 1901 are reproduced below:— The population.

SUB-DIVISION.	Area in square miles.	NUMBER OF		Population	Population per square mile.	Percentage of variation in population between 1801 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Hazaribagh	5,019	2	5,467	763,766	151	-8.2	12,640
Giridih	2,003	1	3,479	417,971	209	+4.0	11,149
DISTRICT TOTAL ...	7,021	3	8,946	1,177,901	168	+1.2	23,789

The towns are HAZARIBAGH, the head-quarters, CHATRA and GIRIDIH. The population is greatest in the west, in the valley of the Barākar river, where there is a fair extent of level country and the coal mines support a considerable number of labourers. The country west and south-west of the central plateau consists mainly of hill and ravine, and has very few inhabitants. The population declined during the decade ending in 1901 in the centre of the District, where recruiting for tea gardens was most active, but in the Giridih sub-division there was a general increase, the growth being most marked in Giridih itself, where the coal mines of the East Indian railway attract a steadily increasing number of labourers. The hardy aboriginal tribes are remarkable for their fecundity and the

climate is healthy, but the soil is barren, and the natural increase in the population is thus to a great extent discounted by emigration. It was hence that the Santāls sallied forth about 70 years ago to people the Daman-i-koh in the Santāl Parganas. This movement in its original magnitude has long since died out, and the bulk of the present emigration is to more distant places, Assam alone containing nearly 69,000 natives of this District. The Magahi dialect of Bihārī is spoken by the bulk of the population, but Santālī is the vernacular of 78,000 persons. Hindus number 954,105 or 81 per cent. of the population, and Mohāmmādāns 119,666 or 10 per cent.

Their
castes and
occupa-
tions.

The most numerous Hindu castes are Ahir or Gōśāls (138,000) and Bhuiyāns (99,000); many of the Bihār castes are also well represented, especially Kurmīs (76,000), Talīs (49,000), Koirīs (47,000), and Chamārs (44,000), while among other castes Gbāt-wāls (40,000), Bhogtās (35,000) and Turīs (23,000) are more common than elsewhere, and Sōkīs (12,000) are peculiar to the District. Most of the Animists are Santāls (78,000), and the bulk of the Musalmāns are Jolāhās (82,000). Agriculture supports 80·7 per cent. of the population; industries 9·1 per cent., commerce 0·2 per cent. and the professions 0·8 per cent.

Christian
Missions.

Of 1,163 Christians in 1901 about three-quarters were natives. Mission work was begun in 1853 by the German Evangelical Lutheran Mission, but was interrupted by the Mutiny. In 1862 another mission was founded by the same society at Singbāni near Hazāribāgh, but in 1868 an unfortunate split took place, and several of the missionaries went over to the English Society for the Propagation of the Gospel. The work carried on by the German mission is chiefly educational. The Free Church of Scotland opened a branch of its Santāl Mission at Pachambā near Girdih in 1871, and maintains a dispensary and schools; their evangelistic work is chiefly among the Santāls. The Dublin University Mission, established at Hazāribāgh in 1892, maintains a boys' high school, upper primary school and First Arts college, in addition to dispensaries at Hazāribāgh, Jolāhā and Petārbār, but it has not been very successful in making conversions.

General
agricul-
tural
conditions.

The most fertile land lies in the valleys of the Dāmodar and the Sakri, the agricultural products of the latter resembling those of the adjoining Districts of Bihār rather than those of the neighbouring parts of Chotā Nāgpur. In Kharakdih the hollows that lie between the undulations of the surface are full of rich alluvial soil, and present great facilities for irrigation, but the crests of the ridges are, as a rule, very poor, being made up of sterile gravel lying on a hard sub-soil. In Rāmgarh the sub-soil is light and open, and the surface is composed of a good ferruginous loam; while many of the low hills are coated with

a rich dark vegetable mould. The beds of streams are frequently banked up and made into one long narrow rice field. For other crops than rice the soil receives practically no preparation beyond ploughing. Failures of the crops are due to bad distribution of the rainfall, never to its complete failure; the soil does not retain water for long, and a break of ten days without rain is sufficient to harm the rice crop.

The salient agricultural statistics for 1903-04 are shown below, areas being in square miles:—

Chief agricultural statistics and principal crops.

SUB-DIVISION.	Total.	Cultivated.	Culturable waste.	Forests.
Hazaribagh ...	5,019	1,616	1,266	64
Giridih ...	2,003	678	605	25
TOTAL ...	7,021	2,294	1,771	89

Rice is the most important crop. *Gorā* or early rice is sown broadcast after the first fall of rain in June, and is reaped about the end of August. *Aphani* or winter rice is sown in June, and reaped in November or December; it is either sown broadcast or transplanted. After rice by far the most important crops are maize and *marua*. Other food grains are *gondli*, *urd*, *barai*, *rahar*, *kurthi*, gram, wheat, barley and *khesāri*; of other food crops the most important are sugarcane, *mahā* and various vegetables. Oilseeds are extensively grown, consisting chiefly of *sarguja*, *til*, rape-seed and linseed, while among other products may be mentioned opium, cotton and *renu*, a jungle root used for the manufacture of *pachoi*. A little tea is still grown, but the industry is rapidly dying out; in 1903-04 there was only one tea garden which had an output of 3,700 lb.

The area under cultivation is gradually being extended by terracing the slopes and embanking the hollows, and by bringing under the plough the tops of ridges. The people have no idea of adopting improved agricultural methods, though they are willing to make use of seed given to them, and cultivators near Hazaribagh and Giridih are beginning to grow English vegetables, such as cauliflowers and tomatoes. Loans amounting to Rs. 51,000 were given during the famine of 1897, and Rs. 29,000 was advanced in 1900-01 under the Agriculturists Loans Act in consequence of a failure of the crops. Little advantage has been taken of the Land Improvement Loans Act.

The breed of cattle is poor. The cattle are ordinarily grazed in the jungles; land is set apart for pasture in villages in which there is no jungle, but the grass is poor, and the cattle get no proper fodder except just after harvest.

Cattle.

Irrigation.

The average irrigated area is estimated at 393 square miles. Irrigation is carried on by means of *bāndās* and *dhārs*, as described in the article in GAYĀ District. Well water is used only for the poppy.

Forests.

Hazāribāgh contains 56 square miles of reserved, and 33 square miles of protected, forest. The Kodarmā reserve, which is the most important forest tract, covers 46 square miles on the scarp of the lower plateau, the elevation varying from about 1,200 feet near Kodarmā to about 500 feet on the Gayā boundary. The predominant tree is *sāl* (*Shorea robusta*), but there are few trees of any size, most of the larger ones having been cut out before the forest was constituted a reserve in 1880. Bamboos are scattered throughout the reserve and the other principal species are varieties of *Terminalia*, *Bauhinia* and *Ficus*. *Bassia latifolia*, *Sterculia urans*, *Cassia fistula*, *Mangifera indica*, *Semecarpus anacardium*, *Butra frondosa*, *Lagerstroemia parviflora*, *Woodfordia floribunda*, *Eugenia jambolana* and *Phoenix acutis*. The minor products are thatching grass, *sabai* grass (*Ischnum angustifolium*), *mahūā* flowers, (*Bassia latifolia*) myrabolams and mica; none of these except mica are at present of any great importance on account of the distance of the forest from the railway. Owing to excessive grazing and cutting, the protected forests contain no timber of any size. In 1903-04 the total forest revenue was Rs. 14,500, of which Rs. 10,000 was derived from the rent for mica mines.

Mineral resources.

From the veins of pegmatite in the gneiss is obtained the mica which has made Hazāribāgh famous. The pegmatites have the composition of ordinary granite, but the crystals have been developed on such a gigantic scale that the different minerals are easily separable. Besides the mica, quartz and felspar, which form the bulk of the pegmatite, other minerals of interest, and sometimes of value, are found. Beryl, for instance, is found in large crystals several inches thick; schorl occurs in nearly all the veins; also cassiterite (tin-stone), blue and green tourmaline. Lepidolite and fluor spar occur near Manimundar (24° 37' N., 86° 52' E.); columbite, which includes the rare earths tantalum and niobium, exists in one or two places; and apatite, a phosphate of lime, is found in the Lakamandwa mica mine near Kodarmā. Mica in the form of muscovite is the only mineral which has been extracted for commercial purposes. It is worked along a belt which runs from the corner of Gayā District across the northern part of Hazāribāgh into Monghyr. Along this belt about 250 mines have been opened. With the exception of Bendi, which is being tested by means of systematic driving and sinking, these are all worked by native methods. The "books" of mica are of various sizes up to 24" by 18" by 10", the more common being about 8" by 4" by 3". The usual practice is to prospect the surface during the rains for

these "books" or indications of them, and then work the shoots or patches during the dry weather. The pumping and winding are done by hand. The total output from 238 mines worked in Hazaribagh in 1903 was 553 tons, valued at $9\frac{1}{2}$ lakhs. The average number of persons employed daily was 5,878, the average daily wages being for a man $2\frac{1}{2}$ to $4\frac{1}{2}$ annas, for a woman 2 annas, and for a child 1 to $1\frac{1}{2}$ annas.

The deposit of cassiterite takes a bedded form conformable to the foliation planes of the gneisses and schists in the neighbourhood of Narangā ($24^{\circ} 10' N.$, $86^{\circ} 7' E.$), in the Pālganj estate, 10 miles west of the Giridih coal-field. Unsuccessful attempts were made to work this deposit by a company which ceased operations in 1893, after having carried down an inclined shaft for over 600 feet along the bed of ore. Cassiterite has also occasionally been obtained in mistake for iron ore in washing river sands, and the native iron smelters have thus obtained tin with iron in their smelting operations. Lead, in the form of a dark red carbonate, has been found at Barhamasia ($24^{\circ} 20' N.$, $86^{\circ} 18' E.$) in the north of the District. Similar material has been found in the soil at Mehandādih ($24^{\circ} 22' N.$, $86^{\circ} 20' E.$), Khesmi ($24^{\circ} 25' N.$, $84^{\circ} 46' E.$), and Nawāda ($24^{\circ} 25' N.$, $84^{\circ} 45' E.$). Argentiferous galena, associated with copper-ores and zinc blende, occurs on the Patro river, a mile north-north-east of Gulgo. An unsuccessful attempt was made in 1880 to work these ores. The sulphide of lead, galena, has also been obtained in connection with the copper-ore deposits of Bāraganda. A deposit, which has been known since the days of Warren Hastings and has been the subject of many subsequent investigations, occurs near Hisātu ($23^{\circ} 59' N.$, $85^{\circ} 3' E.$); an analysis of the ore made by Piddington showed the presence of antimony with the lead. The most noteworthy example of copper ores occurs at Bāraganda in the Pālganj estate, 24 miles south-west of Giridih. In this area the lead and zinc ores are mixed with copper-pyrites, forming a thick lode of low-grade ore which is interbedded with the vertical schists. Shafts reaching a depth of 330 feet were put down to work this lode by a company which commenced operations in 1882, but apparently through faulty management the undertaking was not successful and closed for want of funds in 1891.

Lohārs and Kols formerly smelted iron in this District, but owing to forest restrictions and the competition of imported English iron and steel, the industry has practically died out. The ore used was principally magnetite derived from the crystalline rocks. Hematite is, however, also obtained from the Barākar stage of the Gondwāna rocks of the Karanpurā field, and clay iron stone occurs in a higher stage of the Dāmodar series in the same area.

The most conspicuously successful amongst the attempts to develop the mineral resources is in a little coal-field near Giridih. The small patch of Gondwāna rocks, which includes the coal in this field, covers an area of only 11 square miles, and includes $3\frac{1}{2}$ square miles of the Talcher series, developed in typical form with boulder beds and needle shales, underlying sandstones whose age corresponds with the Barākar stage of the Dāmōdar series. The most valuable seam is the Karharbāri lower seam, which is seldom less than 12 feet in thickness and is uniform in quality, producing the best steam coal raised in India, more than two-thirds of it consisting of fixed carbon. This seam persists over an area of 7 square miles and has been estimated to contain 113 million tons of coal. The Karharbāri upper seam is also a good coal, though thinner, and above it lie other seams, of which the Bhaddoah main seam was at one time extensively worked. The total coal resources of this field are probably not less than 124 million tons, of which over 16 million have been raised or destroyed. Like practically all the coal-fields of Bengal, the Gondwāna rocks of Giridih are pierced by two classes of trap-dykes: thick dykes of basaltic rock, which are probably fissures filled at the time at which the Rājmahāl lava flows, were poured out in upper Gondwāna times, and thin dykes and sheets of a peculiar form of peridotite, remarkable for containing a high percentage of apatite, a phosphate of lime. This rock has done an amount of damage amongst the coals which cannot easily be estimated, as besides cutting across the coal seams in narrow dykes and coking about its own thickness of coal in both directions, it spreads out occasionally as sheets and ruins the whole or a large section of the seam over considerable areas.

In this field 9 mines employed in 1903 a daily average of 10,691 hands and had an output of 767,000 tons. The East Indian Railway Company, by whom the bulk of the coal in this field is raised, work it for their own consumption, and have invested 15 lakhs in their mines.

The miners are of various castes, but Santāls and the lower castes of Hindus, such as Bhuiyās, Mahlis, Ghatwāls, Ohamārā, Dosādhs, and Rājwārs, predominate. The daily wages paid in the mines worked by the East Indian Railway Company are:—for coal-cutters 6 to 8 annas, horse drivers under ground 4 annas; women (under ground) 3 to 4 annas, fitters 8 annas to R. 1-8-0; and for coolies working above ground, men $2\frac{1}{2}$ annas to 4 annas, women $1\frac{1}{2}$ to 2 annas, and children $1\frac{1}{2}$ to $1\frac{1}{4}$ annas. One shaft, the deepest in India, has a depth of 640 feet, and nearly all the coal is wound by modern plant.

This is the only field in the District which is regularly worked, but other patches of Gondwāna rocks are also coal bearing. A patch near the village of Itkhorī, 25 miles north-west of

Hazaribagh, includes about half a square mile of the Barakar stage lying on a considerable area of Talchers. There are three seams containing possibly about two million tons of inferior coal. The Bokaro and Karanpura fields lie in the low ground of the Damodar river at the foot of the southern escarp of the Hazaribagh plateau. The Bokaro field commences 2 miles west of the Jheria field, and is likely to become important with further railway extensions. It covers 220 square miles and includes coal seams of large size, one of 88 feet thick being measured. The coal resources of this field are estimated to aggregate 1,500 million tons. In the Karanpura area a smaller tract of 72 square miles has been separated from the northern field of 472 square miles through the exposure of the underlying crystalline rocks. There is a large quantity of fuel available in these two fields; in the smaller there must be at least 75 million tons and in the northern some 8,750 millions. In the Ramgarh coal-field to the south of the Bokaro field the rocks are so faulted that it may not be profitable to mine the coal.*

Cotton weaving is carried on by the Jolahas, but only the coarsest cloth is turned out. A few cheap wooden toys are made by Kharadis, and blankets by Gareris, while agricultural implements and cooking utensils are manufactured from locally smelted iron ore.

The chief imports are food grains, salt, kerosene oil, cotton twist and European cotton piece-goods, and the chief exports coal and coke. Of the food grains, which form the bulk of the imports, rice comes chiefly from Mánbhūm, Burdwan and the Santál Parganas, wheat from the Punjab and the United Provinces, and gram from Monghyr and Patna; the other imports come from Calcutta. The coal and coke exported by rail in 1903-04 amounted to 495,000 tons, of which 86,000 tons went to Calcutta, 195,000 tons to other parts of Bengal, 914,000 tons to the United Provinces, and the remainder to the Punjab, Central Provinces, Rajputana and Central India. Minor exports are mica, catechu, *sabai* grass, lac, *rahus* and hides. Hazaribagh, Giridih and Chatra are the principal marts and form the centres from which imported goods are distributed by petty traders. The bulk of the traffic is carried by the East Indian Railway which taps the

* The Giridih coal-field, by Sain in Rec. Geol. Surv. Ind., vol. xvii, part iii, 1894; The Bokaro coal-field and the Ramgarh coal-field, by Hazdes in Mem. Geol. Surv. Ind., vol. vi, part ii (1867); the Karanpura coal-field, Mem. Geol. Surv. Ind., vol. vii, part iii (1868); The Jharia coal-field, Mem. Geol. Surv. Ind., vol. vii, part ii (1872), by Ball; The Choje coal-field, Mem. Geol. Surv. Ind., vol. viii, part ii (1872). As regards copper and tin, see Geol. notes on N. Hazaribagh, by Mallet in Rec. Geol. Surv. Ind., vol. vii, part i (1874), and The copper and tin deposits of Chota Nagpur by Oates in Trans. Inst. Mining Engineers, vol. ix, (1895), p. 427.

District at Giridih, but a large amount of goods is carried on pack bullocks and in bullock carts.

I
Railways
and roads.

The only railways at present open are the short branch line connecting Giridih with the East Indian main line at Madhupur, and the Gaya-Katrasgarh line recently constructed, which runs through the north-east of the District. The District board maintains (1903-04) 44 miles of metalled and 521 miles of unmetalled roads, besides 336 miles of village tracks. The most important roads, however, are those maintained by the Public Works department, amounting to 201 miles in length (188 miles metalled and 13 miles unmetalled) and including the Grand Trunk Road, which runs for 78 miles through the District, and the road from Hazaribagh to Ranchi, of which 30 miles lie in the District, and the roads from Hazaribagh to Barhi and Bagodar and from Giridih to Dumri, the aggregate length of which is 82 miles.

Famine.

The District was affected by the famine of 1874; since then the only severe famine was that of 1897, when distress was general over a broad belt running north and south through the District, the thanas most affected being Barhi, Kodarma, Bagodar, Gumia, Ramgarh, Mandu and Hazaribagh. Relief works were opened but were not largely attended, owing partly to the unwillingness of the wilder tribes to engage in unaccustomed forms of labour, and partly to a fear that the acceptance of famine rates of payment would tend to lower wages permanently; a good deal of employment, however, was afforded by the District board, and gratuitous relief was given to beggars and destitute travellers. The daily average number of persons employed on relief works was highest (1,728) in May, while the number in receipt of gratuitous relief reached its maximum (6,836) in June. The expenditure amounted to Rs. 73,000, including Rs. 26,000 spent on gratuitous relief, and loans were granted to the extent of Rs. 51,000.

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sion and
it.

For general administrative purposes the District is divided into 2 sub-divisions with head-quarters at HAZARIBAGH and GIRIDIH. The staff at Hazaribagh subordinate to the Deputy Commissioner consists of 3 Deputy Magistrate-Collectors, while the sub-divisional officer of Giridih is assisted by a sub-deputy collector.

Civil and
criminal
justice.

The chief civil court is that of the Judicial Commissioner of Chota Nagpur. The Deputy Commissioner exercises the powers of a Subordinate Judge, and a Subordinate Judge comes periodically from Ranchi to assist in the disposal of cases. Minor original suits are heard by 3 Munsifs sitting at Hazaribagh, Oharrā and Giridih. Rent suits under the Chota Nagpur Tenancy Act are tried by a Deputy Magistrate-Collector at Hazaribagh by the Munsifs, who are invested with the powers of a Deputy Collector for this purpose, and by the sub-divisional

officer of Giridih; appeals from their decisions are heard by the Deputy Commissioner or the Judicial Commissioner of Chotā Nāgpur. Criminal cases are tried by the Deputy Commissioner, the sub-divisional officer of Giridih and the above-mentioned Deputy and sub-deputy magistrates, and by the Munsif of Chatrā who has been invested with second class powers. The Deputy Commissioner possesses special powers under section 34 of the Criminal Procedure Code, and the Judicial Commissioner of Chotā Nāgpur disposes of appeals from magistrates of the 1st class and holds sessions at Hazaribāgh for the trial of cases committed to his court. Hazaribāgh is the least criminal District in Chotā Nāgpur, and crime is comparatively light.

In 1835, the first year for which statistics are available, 86 separate estates paid a land revenue of Rs. 49,000. The number of estates increased to 244 in 1870-71, but after that date a number of the smaller estates were amalgamated with others and the total number fell in 1903-04 to 157 with a demand of 1·33 lakhs. Of these estates, 72 were permanently settled, 82 were temporarily settled, and 3 were held direct by Government.

In the Hazaribāgh District the eldest son takes the entire estate and provides for the other members of the family by assigning them smaller holdings as maintenance grants. There is thus no tendency to the excessive sub-division of estates which is found in Bihār. Besides these maintenance grants, *jigra* to *ghāticāls*, priests, servants and others are common. The only unusual form of *jāgir* is one known as *putra-putradār*, which remains in the family of the grantee until the death of the last direct male heir, after which it reverts to the parent estate. The incidence of revenue is very low, being R. 0-1-4 per cultivated acre, or only 8 per cent. of the rental, which is R. 1-2-6. The highest rates are realised from rice lands, which are divided into three main classes: *gairā*, the rich alluvial lands between the ridges; *singā*, the land higher up the slopes; and *bād*, the highest land on which rice can be grown. The rates, which are lowest in the central plateau and highest in the Sakri valley, vary for *gairā* land from Rs. 3-10-8 to Rs. 6-5-4 per acre (average Rs. 4-5-4); for *singā* land from Rs. 2-10-8 to Rs. 4 (average Rs. 3-10-8) and for *bād* land from R. 1-10-8 to Rs. 3-10-8 (average Rs. 2-2-8). Other lands are classified as *bārī* or *gharībārī*, the well manured land situated close to the village; *bārbārī*, fairly good land situated farther from the homestead; *churā*, land set apart for growing paddy seedlings; *tānr*, barren land on the tops of the ridges; and *tarri* or rich land on the banks or in the beds of rivers. For these the ryot usually renders predial services in lieu of rent.

Village lands are of four kinds. *Munjhilās* is a portion of the best land set apart for the immediate head of the village. It

is frequently sublot, sometimes at a cash rent, but more often on the *adibatni* system under which each party takes half the produce. When held *khas*, it is cultivated by the ryots for the proprietor, the latter supplying the seed and a light meal on the days on which the villagers are working for him. *Jiban* is land in which the ryots have occupancy rights. *Khundiat* or *sajwat* lands are those reclaimed from jungle or waste land, and the ryot and his descendants have a right of occupancy, paying rent at only half the rate prevailing in the neighbourhood for *jiban* lands. *Utkar* land is that cultivated by tenants-at-will. The rents of *jiban* and *utkar* lands are usually payable in cash, but in the Sakri valley the system of payment by assessment or division of the produce is common. The following table shows the collections of land revenue and total revenue, under the principal heads, in thousands of rupees:—

	1880-81.	1890-91.	1900-01.	1903-04.
Land revenue ...	1,10	1,35	1,81	1,34
Total revenue ...	3,04	4,02	5,42	6,74

Local and
municipal
govern-
ment.

Outside the municipalities of HAZARIBAGH, CHATRA, and GIRIDIH, local affairs are managed by the District board. In 1903-04 its income was Rs. 96,000, including Rs. 60,000 derived from rates, and the expenditure was Rs. 1,01,000, the chief item being Rs. 59,000 spent on civil works.

Police and
jails.

The District contains 18 police stations and 20 outposts, and in 1903 the force subordinate to the District Superintendent of Police consisted of 3 inspectors, 33 sub-inspectors, 54 head-constables and 431 constables. The Central jail at HAZARIBAGH has accommodation for 1,257 prisoners, and a subsidiary jail at GIRIDIH for 21. The Hazaribagh Reformatory school has accommodation for 357 boys.

Education.

Education is very backward, and only 2·6 per cent. of the population (5·2 males and 0·2 females) could read and write in 1901. The number of pupils under instruction increased from 6,234 in 1882-83 to 15,867 in 1892-93; in 1900-01 they numbered 14,346, while in 1903-04, 16,440 boys and 2,014 girls were at school, being respectively 19·2 and 2·2 per cent. of the children of school-going age. The various missions maintain schools for the benefit of the aboriginal tribes. The most notable educational institutions are the Dublin University Mission First Arts college, and the Reformatory at Hazaribagh. The total number of institutions, public and private, in 1903-04 was 692, including the Arts college, 16 secondary

schools, 643 primary schools and 32 special schools. The expenditure on education was Rs. 1,12,000, of which Rs. 38,000 was met from Provincial funds, Rs. 31,000 from District funds, Rs. 800 from municipal funds and Rs. 23,000 from fees.

In 1903 the District contained 7 dispensaries, of which Medical 5 had accommodation for 64 in-door patients. The cases of 37,411 out-patients and 586 in-patients were treated during the year, and 1,570 operations were performed. The expenditure was Rs. 11,000, of which Rs. 1,200 was met by Government contributions, Rs. 2,000 from local and Rs. 2,400 from municipal funds, and Rs. 5,000 from subscriptions.

Vaccination is compulsory only in the Hazaribagh, Giridih and Vaccina- Chatra municipalities. In 1903-04, 41,000 persons or 36 per tion. thousand of the population were successfully vaccinated.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi, 1877; F. B. Bradley-Birt, *Chota Nagpur*, 1903.]

Hazaribagh Sub-division.—Head-quarters sub-division of Hazaribagh District, Bengal, lying between $23^{\circ} 25'$ and $24^{\circ} 38' N.$, and $84^{\circ} 27'$ and $86^{\circ} 7' E.$, with an area of 6,019 square miles. The sub-division consists of three distinct tracts, a high central plateau, a lower plateau extending along the northern boundary, and the valley of the Dāmodar to the south. Its population was 760,164 in 1901, compared with 762,510 in 1891, the density being 151 persons to the square mile. It contains 2 towns HAZARIBAGH, its head-quarters (population 15,799), and CHATRA, (10,599), and 5,440 villages. The sub-division contains some interesting archaeological remains, consisting of rock temples at MAHUDI, Buddhist inscriptions at KULUHA HILL and an old fort at KUNDA.

Giridih Sub-division.—Eastern sub-division of Hazaribagh District, Bengal, lying between $23^{\circ} 44'$ and $24^{\circ} 49' N.$, and $85^{\circ} 39'$ and $86^{\circ} 34' E.$, with an area of 2,002 square miles. The northern portion of the sub-division consists of hilly country and undulating uplands, which merge in the valley of the Barakar on the south and of the Sakri river on the north. To the south there is a second hilly tract, in which PARAMNATH hill is situated, and along the southern boundary is the valley of the Dāmodar. Its population was 417,797 in 1901, compared with 401,811 in 1891, the density being 209 persons to the square mile. It contains one town GIRIDIH, its head-quarters (population 9,433) and 3,408 villages. Important coal-fields belonging to the East Indian Railway are situated in the neighbourhood of Giridih town. Paramnath hill is a well known place of pilgrimage for the Jains.

Chatra.—Town in the head-quarters sub-division of Hazaribagh District, Bengal, and one of the principal trade centres of the District, situated in $24^{\circ} 12' N.$ and $84^{\circ} 53' E.$, about 36 miles north-west of Hazaribagh town. Population (1901) 10,599.

On the 2nd October 1857, an engagement took place at Chattrā between H. M.'s 53rd foot, supported by a detachment of Rattray's Sikhs, and the Rāmgarh Battalion, which had mutinied at Rānchī, and was marching to join the rebel zamindār Kuar Singh at Bhujpur in Shāhabād. The mutineers, posted in great force on the brow of a hill, made a stubborn resistance, but were defeated with a loss of 40 men and all their supplies. Chattrā was constituted a municipality in 1899. The average income for the decade ending in 1901-02 was Rs. 6,000 and the expenditure Rs. 5,000. In 1903-04 the income was Rs. 6,000 mainly from a tax on persons (or property tax), and the expenditure was Rs. 5,000.

Giridih Town.—Head-quarters of the sub-division of the same name in the Hazāribāgh District of Bengal, situated in 24° 10' N. and 86° 22' E. Population (1901) 9,433. Giridih is connected by a branch line with the main line of the East Indian Railway at Madhapur and is the centre of the Karharbāri coal-field (see HAZARIBĀGH DISTRICT). Giridih was constituted a municipality in 1902. Its average income since its constitution has been Rs. 3,000 and its expenditure Rs. 2,900. In 1903-04 the income was Rs. 5,800, mainly derived from a tax on persons (or property tax), and the expenditure was Rs. 5,200. The town contains the usual sub-divisional offices and a sub-jail with accommodation for 21 prisoners.

Hazāribāgh Town.—Head-quarters of Hazāribāgh District, Chotā Nāgpur, Bengal, picturesquely situated in 23° 59' N. and 85° 22' E. on the high central plateau of the District, at an elevation of 2,000 feet above sea-level, in the midst of a group of conical hills. Population (1901) 15,799. The town is little more than a cluster of hamlets, with intervening cultivation, which sprung up round the former military bazar. Hazāribāgh has been the head-quarters of the civil administration since 1834. The cantonment lies south-east of the town. The last military force stationed here was the second battalion, 22nd Regiment; but owing to an outbreak of enteric fever in 1874, which resulted in numerous deaths, the troops were withdrawn, with the exception of a small detachment, which was chiefly designed to guard against a possible outbreak of the prisoners in the European penitentiary situated here. Subsequently, on the abolition of the penitentiary, the European troops were entirely withdrawn. Hazāribāgh was constituted a municipality in 1899. The average income for the decade ending in 1901-02 was Rs. 11,000 and the expenditure Rs. 10,800. In 1903-04 the income was Rs. 17,000, of which Rs. 5,000 was derived from a tax on persons (or property tax), Rs. 4,000 from a conservancy rate, while the expenditure was Rs. 16,000. The town contains the usual public buildings. The Central jail has accommodation for 1,257 prisoners;

the principal articles manufactured are blankets and cloth. The Hazaribagh Reformatory school has since 1882 occupied the buildings formerly used for the European penitentiary. It is managed by a board subject to the general control of the Director of Public Instruction, and has cubicle accommodation for 357 boys, who are taught weaving, agriculture, tailoring, gardening, carpentry, shoe-making and blacksmith's work. The chief educational institution is the Dublin University Mission First Arts college which was opened in 1899.

Kuluhā Hill.—Hill in the head-quarters sub-division of Hazaribagh District, Bengal, lying between $24^{\circ} 16'$ and $24^{\circ} 27'$ N., and $84^{\circ} 48'$ and $85^{\circ} 6'$ E. It abounds with Buddhist relics, and has a temple dedicated to Buddha and impressions said to have been made by Buddha's feet. The inscriptions which date between the eighth and 12th centuries appear to be almost exclusively Buddhist, but are in very bad order. The Brāhmins have appropriated the sacred place of the Buddhists, and on the top of the hill is a temple of Durgā called Kuleswari. Two fairs are held annually on the hill in Chait and Aswin.

Kundā.—Ruined fort in the head-quarters sub-division of Hazaribagh District, Bengal, situated in $24^{\circ} 13'$ N. and $84^{\circ} 30'$ E. It is in the form of a parallelogram, about 280 feet long by 170 feet broad, with a square central entrance tower on the west front, and four square corner towers connected by straight battlemented walls with an average height of 30 feet. It was admirably suited for defence purposes, being situated on a tongue of land projecting into a basin surrounded by hills, except on the east side, where it commands a gorge.

Lagu.—Detached hill south of the central plateau of the Hazaribagh District, Bengal, situated in $23^{\circ} 47'$ N. and $85^{\circ} 42'$ E. in the head-quarters sub-division. The northern face has a bold scarp 2,200 feet in height; and the highest point is 3,203 feet above the sea.

Mahābar.—Range of hills in the head-quarters sub-division of Hazaribagh District, Bengal, extending between $24^{\circ} 10'$ and $24^{\circ} 14'$ N. and $85^{\circ} 24'$ and $85^{\circ} 35'$ E. in a general direction east and west for 14 miles. Their sides are steep, but not entirely scarped; the top undulates and has an average breadth of about a mile. The general elevation above the Sakri valley is 1,600 feet, and the elevation above the sea at the eastern end 2,210 feet. A waterfall, Kokalkāt, 90 feet in height, leaps down from the northern face of the range in Gayā District.

Mahudi.—Hill in the head-quarters sub-division of Hazaribagh District of Bengal; situated in $24^{\circ} 12'$ N. and $85^{\circ} 13'$ E. about 8 miles from the southern face of the Hazaribagh plateau. The hill is 2,437 feet above the sea, falling steeply on every side for 800 feet. Four rock-cut temples are situated on the hill.

Pachambā.—Village in the Giridih sub-division of Hazaribagh District, Bengal, situated in $24^{\circ} 13'$ N. and $86^{\circ} 16'$ E. $3\frac{1}{2}$ miles from Giridih railway station. Population (1901) 3,510. Pachambā is the head-quarters of the Free Church of Scotland Mission to the Santāls and contains a dispensary and schools. An annual fair is held here in the month of Kārtik.

Parasnāth.—Hill and place of Jain pilgrimage, in the east of the Giridih sub-division of Hazaribagh, situated in $23^{\circ} 58'$ N. and $86^{\circ} 8'$ E., and adjoining Manbhūm District, Bengal. The mountain consists of a central narrow ridge, with rocky peaks, rising abruptly to 4,480 feet above sea-level from the plains on the south-west, and throwing out long spurs, which extend towards the Barākar river on the north. A spur to the south-east forms the boundary between Hazaribagh and Manbhūm, and eventually subsides into an extended belt of high land with peaked hills in the latter District. The hill is now easily approached by the East Indian Railway to Giridih station, and thence by a short journey of about 18 miles along a metalled road. In 1858 Parasnāth was selected as a convalescent depôt for European troops, but on account of the confined area of the plateau at the summit and the solitude, it was found unsuitable for the purpose and was abandoned in 1868. The building formerly used as the officers' quarters is now utilized as a dāk bungalow. Pilgrims flock, to the number of 10,000 annually, from distant parts of India to this remote spot—the scene of Nirvāna or “beatific annihilation” of no less than 10 of the 24 deified saints who are the objects of Jain adoration. From the last of these, Pārsva or Pārsvanātha, the hill, originally called Samet Sikhar, took its better known name of Parasnāth. Pilgrimage to Parasnāth is still as popular as ever among the Jains; and new shrines, a single one of which in white marble cost Rs. 80,000, are from time to time erected. The temples lie well apart from the plateau, and the improved means of communication hold out a possibility of the latter being again utilized as a small sanitarium. [Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi., pp. 216, 217.]

Rāngarh.—Old District of Bengal stretching on the north-west as far as Sherghāti in Gayā and including on the east *pargana* Ohakai of Monghyr and the zamindari rāj of Pānchet, and on the south-west and south the present District of Palāman, while Rānchi owed a loose allegiance as a tributary estate administered by its own chief. This unwieldy District was broken up after the Ed. insurrection in 1831-32, parts of it going to Gayā, Monghyr, Manbhūm and Lohārdagā (now Rānchi), while the rest was formed into the modern District of Hazaribagh.

Rānchi District.—District in the Chotā Nāgpur Division of Bengal, lying between $22^{\circ} 20'$ and $23^{\circ} 43'$ N., and $84^{\circ} 0'$ and $85^{\circ} 54'$ E. It is the largest District in Bengal, having an area of 7,128 square miles. It is bounded on the north by the Districts of Palāman and Hazāribāgh; on the east by Manbhūm; on the south by Singhbhūm and the Tributary State of Gāngpur; and on the west by the Jashpur and Surgujā States and Palāman District.

Bound-
aries, con-
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systems.

The District consists broadly of 2 plateaux, the higher of which, on its northern and western sides, has an elevation of about 2,000 feet and covers about two-thirds of its area, while the lower plateau lies on the extreme eastern and southern borders and has only half this elevation. The *ghats* or passes which connect the two are for the most part steep and rugged, and are covered with a fair growth of timber. In the north-western corner of the District are situated several lofty ranges of hills, some of them with level tops, locally called *pāts*, a few having an area of several square miles, but sparsely inhabited and with very little cultivation. The highest point in the District is the Sāru hill about 20 miles west of the town of Lohārdagā, which rises to 3,607 feet above sea-level. With the exception of the hills in the north-west and of a lofty range which divides the main portion of the lower plateau from the secluded valley of Sonapet in the south-eastern corner of the District, the plateaux themselves are flat and undulating with numerous small hills. The District possesses varied beauties of scenery, especially in the west and south, where bare and rugged rocks alternate with richly wooded hills enclosing secluded and peaceful valleys. Not least among the scenic features are the various waterfalls, any of which would in a western country be regarded as worthy of a visit even from a distance. The finest is the Hudrugghā on the Subarnarekhā river about 30 miles east of Rānchi town; but several others are hardly inferior, *e.g.*, the Dasamghāgh near Būndu, two Peruāghāghs (one in Kochedegā and one in Basā thāna) so called because of the hundreds of wild pigeons which nest in the crevices of the rocks round about all these falls, and the beautiful though almost unknown fall of the Sankh river, (known as the Sadnighāgh from the adjacent village of Sadni Konā), where it drops from the lofty Rājdera plateau on its way to the plains of Barwe below. The river system is complex, and the various watersheds scatter their rivers in widely divergent directions. Near the village of Nagra, 12 miles west and south-west of the Rānchi town, rise the SUBARNAREKHA (the golden line or thread) and the South Kool (a very common name for rivers in Chotā Nāgpur but apparently without any specific meaning), the former on the south side and the latter on the north. The Subarnarekhā, of which the chief affluents in this District are the Kokro, the Kānchi, and the

Karkāri, flows at first in a north-easterly direction, passes the town of Rānchi at a distance of about 2 miles, and eventually running due east, flows through a narrow and picturesque valley along the Hazāribāgh border into the District of Mānbhūm. The South Koel, on the other hand, starting in a north-westerly direction, runs near Lohārdāgā, and turning south again, flows across the District from north-west to south-east into Gāngpur State and there joins the Sankh, which, rising in the extreme west of the District, also runs south-east, the united stream being known as the BRAHMANT. Within almost a few yards of the Sankh rises another Koel, known as the North Koel, but this stream flows to the north and eventually, after traversing the Palāman District, joins the Son under the plateau of Rōhtās. None of these rivers contains more than a few inches of water in the dry season, but in the rains they come down in sudden and violent freshets which for a few hours, or it may be even days, render them well nigh impassable. Lakes are conspicuous by their absence, the explanation being that the granite which forms the chief geological feature of the District is soft and soon worn away.

Geology.

The geological formations are the Archæan and the Gondwāna. Of the latter all that is included within the District is a small strip along the southern edge of the Karanpur coal-fields. The rock occupying by far the greatest area is gneiss of the kind known as Bengal gneiss, which is remarkable for the great variety of its component crystalline rocks. The south of the District includes a portion of the auriferous schists of Chotā Nāgpur. These form a highly altered sedimentary and volcanic series, consisting of quartzites, quartzitic sandstones, slates of various kinds, sometimes shaly, hornblendic, mica, talcose and chloritic schists. Like the Dhārwar schists of southern India, which they resemble, they are traversed by auriferous quartz veins. A gigantic intrusion of igneous basic diorite runs through the schists from east to west forming a lofty range of hills, which culminate in the peak of Dalmā in Mānbhūm, whence the name Dalmā trap has been derived. In the neighbourhood of this intrusion the schists are more metamorphosed and contain a larger infusion of gold.*

Botany.

The narrower valleys are often terraced for rice cultivation and the rice fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocatantus strictus* is often prominent. The steep slopes of the ghāts are covered with a dense forest mixed with climbers. *Sal* (*Shorea*

* The gold bearing rocks of Chotā Nāgpur have been described by S. M. Naclaren in Records of the Geological Survey of India, vol. XXX, part II.

robusta) is gregarious; among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, *Adina*, which these forests share with the similar forests on the lower Himalayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soyimida*, *Neuclella*, *Hardwickia* and *Bassia*, which do not cross the Gangetic plain. One of the features of the upper edge of the *ghats* is a dwarf palm, *Phoenix acaulis*; striking too is the wealth of scarlet blossom in the hot weather produced by the abundance of *Butea frondosa* and *B. superba*, and the mass of white flower along the *ghats* in November displayed by the convolvulaceous climber *Perana paniculata*. The jungles also contain a large variety of tree and ground orchids.

The Indian bison (*gaur*) is probably extinct as an inhabitant ^{of the District} ^{of the District}, but a wanderer from Gangpur State or Palamau may occasionally even now be encountered near the boundary. Tiger, leopard, panther, hyena, bear, and an occasional wolf are to be found in all jungly and mountainous parts, while sambar (*Cervus unicolor*), nilgai (*Doelaphus tragocamelus*), black buck, chitra or spotted deer, and the little ko'ra or barking deer (*Cervulus muntjac*) are common in all the larger jungles.

The temperature is moderate except during the hot weather months of April, May and June, when the westerly winds from Central India cause high temperature with low humidity. The mean temperature increases from 76° in March to 85° in April and 88° in May, the mean maximum from 88° in March to 100° in May, and the mean minimum from 63° to 76°. During these months humidity is lower in Chota Nagpur than in any other part of Bengal, falling in Ranchi to 43 per cent. in March. During the cold weather months the mean temperature is 63° and the mean minimum 51°. The average rainfall for the year is 52 inches, of which 8·1 inches fall in June, 13·6 in July, 13·7 in August and 8·8 in September. ^{Climate and temperature.}

The history of Chota Nagpur divides itself into four well marked periods. During the first the country was in the undisturbed possession of the Mundā and Oraon races, who may be presumed to have reclaimed it from a state of uncultivated forest; it was at that time called Jharkari or the forest tract. The second period embraces the subjection of the aboriginal village communities to the chiefs of the Nagbansi family. The birth at Sūtiamba, near Pithauria, 10 miles north of Ranchi town, of the first of this race, Phani Mukuta Rai, the son of the Brahman's daughter Pāmī and the snake god, Pundarikā Nag, is a well known incident of mythology. Whatever the real origin of the family, it is certain that at some unknown time the aborigines of Chota Nagpur, either by voluntary submission or by force of arms, came under the sway of the Nagbansi Rājās and ^{History.}

so continued until they in turn became subject to the Musalman rulers of Upper India. This event, which may be taken as inaugurating the third period in the history of Chotā Nāgpur, took place in the year 1585 when Akbar sent a force which subdued the Rājā of Kokrah, or Chotā Nāgpur proper, which was celebrated for the diamonds found in its rivers; the name still survives as that of the most important *pargana* of Rānchi District. Musalman rule appears for a long time to have been of a very nominal description, consisting of an occasional raid by a Muhammadan force from south Bihār and the carrying off of a small tribute, usually in the shape of a few diamonds from the Sankh river. Jahāngir sent a large force under Ilākhān Khān, governor of Bihār, and thoroughly subdued the 46th Kokrah potentate, Durjan Sāl, carrying him captive to Delhi and thence to Gwalior, where he was detained for 12 years. He was eventually reinstated at Kokrah with a fixed annual tribute, and it would appear that the relations thus formed continued on a more settled basis until the depredations of the Marāṭhas in the 18th century led, with other causes, to the cession of the Chotā Nāgpur country to the British in 1765. A settlement was arrived at with the Nagbatal Mahārāja in 1772, but after a trial of administration in which he was found wanting, the country now included in Rānchi District was, along with other adjoining territories, placed under the charge of the Magistrate of Rāmgarh in the Hazaribagh District. This was in 1816 or 1817. Meanwhile the gulf between the foreign landlords and their despised aboriginal tenants had begun to make itself felt. A large proportion of the country had passed from the head family, either by way of maintenance grants (*khorposh*) to younger branches or of service grants (*ṣāgir*) to Brāhmins and others, many of whom had no sympathy with the aborigines and only sought to wring from them as much as possible. The result was a seething discontent among the Mundās and Orons which manifested itself in successive risings in the years 1811, 1820 and 1831. In the last year the revolt assumed very serious proportions and was not suppressed without some fighting and the aid of 3 columns of troops, including a strong body of cavalry. It had long become apparent that the control from Rāmgarh, which was situated outside the southern plateau and in reality formed part of a more northern administrative system, was ineffective; and in 1833 Chotā Nāgpur proper with Dhalbhum was formed into a separate province, known as the South-Western Frontier Agency, and placed in the immediate charge of an Agent to the Governor-General aided by a Senior and Junior Assistant; the position of the former corresponding closely with that of the present Deputy Commissioner of Ranchi. In 1856 the system of government was again altered, and Chotā Nāgpur was constituted a non-regulation province

under a Commissioner. In the Mutiny of 1857 the head branch of the Chota Nagpur family held firm, though the Rānagarh Battalion at Ranchi mutinied and several of the inferior branches of the Nāgbansis seceded. Chief among these in Ranchi District was the zamīndār of Barkāgarh, whose property was confiscated and now forms a valuable Government estate. The subsequent history of the District has been uneventful, with the exception of periodical manifestations of the discontent of the Mundā population in the south and south-east. This was fanned during the last 15 years of the 19th century by the self-interested agitation of so-called *sardārs* or leaders, whose chief object has been to make a living for themselves at the expense of the people, and also by the misrepresentations of a certain section of the German missionaries. It culminated in a small rising in 1899 under one Birā Mundā, who set himself up as a God-sent leader with miraculous powers. The movement was, however, wanting in dash and cohesion, and was suppressed without difficulty by the local authorities, the ring-leader being captured, and ending his days from cholera in the Ranchi jail. When the South-Western Frontier Agency was established in 1883, the District, which was then known as Lohārdagā, included the present District of Palāman and had its head-quarters at Lohārdagā 45 miles west of Ranchi. In 1840 the head-quarters were transferred to their present site, and in 1892 the subdivision of Palāman with the Torī *pargana* was formed into a separate District.

Doirānagar, which lies about 40 miles to the west and south of Ranchi, contains the ruins of the palaces built in the last quarter of the 18th century by Mahārāja Rām Sahi Deo and his brother the Kuar Gokhal Nāth Sahi Deo, and also of some half dozen temples erected for the worship of Mahādeo or Ganesh. The stronghold of the former Rājā of Jashpur, one of the old chiefs brought into subjection by the Mughals, is situated about 2 miles north of Getaland in the Jashpur *pargana*. The only other relic worthy of note is the temple at Chauria on the eastern outskirts of the town of Rānoli. 'Chokābatu' or the place of mourning is a village in the south-west of the District famous for its large burial ground, which is used by both Muhammadans and Mundās.

The recorded population of the present area rose from 813,328 in 1872 to 1,058,160 in 1881, to 1,128,886 in 1891 and to 1,187,925 in 1901. The large apparent increase in the first decade may be in part attributed to the imperfections of the first census. The subsequent growth would have been greater but for the drain of coolie recruiting for the tea and other industries, coupled with a year of sharp scarcity just before the census of 1901. The more jungly tracts are very malarious, but on the whole the climate compares favourably with that of other parts of

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Bengal. The salient statistics of the census of 1901 are reproduced below:—

SUB-DIVISION.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1901 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Rānchi	2,508	2	2,016	202,130	815	+27	24,945
Gumla	2,923	1	1,167	434,689	150	+97	7,018
DISTRICT TOTAL	5,431	3	3,183	636,819	167	+52	31,963

NOTE.—In 1905 a new sub-division, Khunti, with an area of 1,140 square miles, was constituted, and the area of the Rānchi sub-division was reduced to 2,408 square miles. The population of the Rānchi and Khunti sub-divisions is 627,632 and 225,407 respectively.

The four towns are RANCHI the present, and LOHARDAGA the former head-quarters, BUNDU and PALKOT. The density of population declines steadily from the north-east to the west and south-west; the greatest growth has taken place along the south of the District. Emigration has for many years been very active. In 1897, 4,096 coolies were despatched to the Assam tea gardens, in 1898, 4,329 and in 1899, 3,244; in 1900 owing to a failure of the crops the number rose to 6,307, but since then it has fallen to 2,750 in 1901, and to 1,700 in 1902. The recent diminution is due in part to the very much closer supervision over the operations of the recruiters provided by recent legislation.

There is also a large but unrecorded exodus to the tea gardens of Darjeeling and the Duārs, which are worked with free labour, and to the coal mines of Mānbhūm and Burdwān; during the winter months many visit the Districts of Bengal proper to seek employment in earthwork and in harvesting the crops. The total number of emigrants at the time of the census of 1901 was no less than 275,000, of whom 92,000 were in Assam and 80,000 in the Jalpaiguri District. Hindī is spoken by 42½ per cent. of the population. The dialect most in vogue is a variety of Bhōjpuri known as Nāgpuria, which has borrowed some of its grammatical forms from the adjoining Ohhattisgarhī dialect. Languages of the Mundā family are spoken by 30 per cent. of the population, the most common being Mundāri, which is the speech of 290,000 persons, and Kharī, which is spoken by 50,000. Kurukh, or Oraon, a Dravidian language, was returned at the census as the parent tongue of rather more than a quarter of the population, but as a matter of fact many of the Oraons have abandoned their tribal language in favour of a debased form of Hindī. Hindus number 474,540 persons (or 40 per cent. of the population), Animists 546,416 (46 per cent.), Musalmāns 41,072

(3½ per cent.), and Christians 124,958 (10½ per cent.). Animism is the religion, if such it can be called, of the aboriginal tribes, but many such persons now claim to be Hindus, and the native Christians of the Ranchi District have been received almost entirely from their ranks.

Of the aboriginal tribes the most numerous are the ORAONS (279,000), MUXNÁS (236,000) and KHARÍAS (41,000). The Oraons are found chiefly along the north and west, the Mundás in the east and the Khariás in the south-west of the District. Among the Hindu castes Kurmis (49,000) and Ahirs (Goálás) and Lohárs (each 37,000) are most largely represented; the last named probably include a large number of aboriginal blacksmiths. Agriculture supports 79 per cent. of the population, industries 11 per cent., commerce 0·6 per cent. and the professions 1·2 per cent.

Christians are more numerous than in any other Bengal District and, in fact, number five-elevenths of the whole Christian population of Bengal and Eastern Bengal. Missionary effort commenced shortly before the middle of the 19th century, the converts consisting almost entirely of Oraons (61,000), Mundás (52,000) and Khariás (10,000). The German Evangelical Lutheran Mission was established in Ranchi in 1845 and was originally known as Gossner's Mission. An unfortunate disagreement subsequently took place, and in 1869 it was split up into two sections, the one enrolling itself under the Society for the Propagation of the Gospel, and the other retaining the name of Gossner's Mission. The progress made during recent years has been phenomenal, the number of converts having increased from 19,000 in 1891 to three times that number in 1901. The Mission now possesses 10 stations in the District, and the workers include 21 European missionaries, 19 native pastors and 515 catechists, teachers, etc. The Church of England Mission, which had its origin from the split in Gossner's Mission, had in 1901 a community of 13,000, compared with 10,000 in 1891. The Roman Catholic Mission is an offshoot from a mission founded at Singhbhum in 1869, which was extended to Ranchi in 1874. It has now 11 stations in the District, and its converts in 1901 numbered 54,000 or about three-fifths of the total number of Roman Catholics in Bengal and Eastern Bengal. The Dublin University Mission, which commenced work at Hazaribagh in 1892, opened a branch at Ranchi in 1901.

The greater part of the District is an undulating tableland, but towards the west and south the surface becomes more broken; the hills are steeper, and the valleys are replaced by ravines where no crops can be grown. Cultivable land ordinarily falls into two main classes, *den* or levelled and embanked lowlands, sub-divided according to the amount of moisture which they naturally retain, and *tanr* or uplands, which include alike the *bari* or homestead lands round the village sites and the stony and

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infertile lands on the higher ground. Generally speaking, the low embanked lands are entirely devoted to rice, while on the uplands rice is also grown but in company with a variety of other crops.

The salient agricultural statistics for 1903-04 are shown below, areas being in square miles:—

Chief agricultural statistics and principal crops.

Sub-division.	Total.	Cultivated.	Culturable waste.	Fertile.
Ranchi	3,506	1,254	537	2
Gondia	2,623	815	539	...
TOTAL	7,123	2,069	1,076	2

NOTE.—In 1905 a new sub-division, with head-quarters at Khunti, was constituted from a portion of the Ranchi sub-division. The total area of the Ranchi and Khunti sub-divisions is 2,386 and 1,140 square miles respectively.

The chief staple is rice, grown on 1,914 square miles, the upland paddy being invariably sown broadcast, while the lowland paddy is either sown broadcast or transplanted. Other important cereals are *gondli* or the small millet (*Panicum mitare*) and *amard*; pulses, especially *urd*, and oilseeds, chiefly *sargija* and mustard, are also extensively grown. The *khadar* harvest, reaped in August and September, includes the upland rice crops, millets and pulses, and the *kharij*, reaped in the latter part of November, December and January, includes the whole of the paddy crops on the embanked lands, *sargija* and one of the varieties of *urd* pulse. Though in area there is apparently not much difference between these harvests, the latter is by far the more important of the two owing to the weight of paddy taken off the *don* lands. The *rabi* harvest in February is relatively very small, the only important crops being *rahar* (*Cajanus indicus*) and *sarson*. Tea was at one time somewhat extensively cultivated, but the soil and the rainfall do not appear to be suited to the production of the finer varieties, and the industry has of late years sensibly declined. In 1903 there were 21 gardens with 2,256 acres under tea and an outturn of 308,000 lbs. Market gardening is carried on to a small extent in the neighbourhood of the large towns by immigrant Koiris from Bihar.

Improvements in agricultural practice.

The low land most suitable for embanked rice cultivation has already been taken up, and as the cost of levelling and embanking the higher ground is considerable, the extension of cultivation proceeds but slowly. The native cultivator employs primitive methods and displays no interest in the introduction of improvements. In Government estates experiments have been made

with improved seeds, especially of the potato plant, and on the Getalsud tea estate some *tamr* land has been put under the *sisal* aloe and experiments in fibre extraction are being made. The construction of tanks for irrigation purposes by erecting dams across the slopes, though they would be cheap and effective, has been but little resorted to, except at Kalebira and in a few villages in Government estates. Cow-dung is used for manuring lowland rice, and ashes for the fertilization of the uplands, especially for cotton. In the lean years, 1897 and 1900, advances of Rs. 20,000 were made under the Land Improvement Loans Act and of Rs. 1,43,000 under the Agriculturists' Loans Act.

No good cattle are bred; pigs and fowls are largely kept by the aboriginal inhabitants, especially in the remoter parts and on the higher plateaux.

Extensive jungles under private ownership exist in the north-west and south, but the only Government forest is a small reserved forest covering 2 square miles near Ranchi town. Forests.

The Sonapet area at the south-east corner of the District, which is almost entirely surrounded by the *L'aimā* trap, has long been known to contain gold, but, from the recent investigations of experts, it appears very doubtful whether its extraction either from the alluvium or from any of the quartz veins can ever prove remunerative. Iron ore of an inferior quality abounds throughout the District, and is smelted by the old native process and used for the manufacture of agricultural implements, etc. Minerals.
In the south-east of the *Tamār* *pargana* a soft kind of steatite allied to soapstone is dug out of small mines and converted into various domestic utensils. The mines go down in a slanting direction, and in one or two instances a depth of about 150 feet has been reached. The harder and tougher kinds of trap make good road metal, while the softer and more workable forms of granite are of easy access and are much used for the construction of piers and foundations of bridges and other buildings. Mica is found in several localities, especially near Lohārdagā and elsewhere in the north of the District, but not in sufficient quantities or of a quality good enough to make it worth mining.

The chief industry is the manufacture of shellac. The lac insect is bred chiefly on the *kusum* (*Schleichera trifuga*) and *pālās* (*Butea frondosa*) trees, and shellac is manufactured at some half dozen factories, the largest being at Ranchi and Būndu. Brass and bell-metal articles are manufactured at Lohārdagā, and coarse cotton cloths are woven throughout the District. Arts and manufactures.

The chief exports are rice, oilseeds, hides, lac and tea. *Myrabolams* (*Terminalia chebula*) are also extensively exported. Com- merce.
The chief imports are wheat, tobacco, sugar, *gur*, salt, piece-goods, blankets and kerosene oil. The principal places of trade are Ranchi, Lohārdagā, Būndu, Palkot and Gobindpur. In the

west of the District, owing to the frequent *gāts* with only bridle paths across them, the articles of commerce are carried by strings of pack-bullocks, of which great numbers may be met after the crop-cutting season, passing in or out of Barwa to trade either in Rānchi or in the Jashpur and Surgujā States.

Railways and roads.

No railways enter the District, and practically the whole of the external trade is carried along the cart road which connects Rānchi town with Purulia on the Bengal-Nagpur Railway. This road, and those to Chaibāsa and Hazaribagh, with an aggregate length in the District of about 100 miles, are maintained by Government. There are also 919 miles of road (including 170 miles of village tracks) maintained by the District board. The most important of these are a gravelled road, 52 miles in length, connecting Rānchi with Lohārdagā, and unmetalled roads from Rānchi to Būndu and Tamār, Pālkoṭ, Bero and Kurdeg, and Sesai, whence one branch runs to Lohārdagā and another through Gumla. There is a ferry over the Koel river, where it crosses the road to the new sub-divisional head-quarters at Gumla, but as a rule forries are little used, as the rivers, when not easily fordable, become furious hill torrents which it is dangerous to cross.

Famines.

The District was affected by the famine of 1874, and the harvests were very deficient in 1891, 1895, 1896 and 1899, but it was only on the last two occasions that relief operations were found necessary. In 1897 the test works at first failed to attract labour, and it was hoped for a time that the people would be able to surmount their trouble without help from Government. Great distress subsequently manifested itself in the centre of the District, but relief operations were at once undertaken and the acute stage was of very short duration. Altogether 52,710 persons found employment in relief works, and gratuitous relief was given to 153,200 persons, the expenditure from public funds being Rs. 18,000. The District was, however, never officially declared affected, and relief operations were only carried on for a few months on a small scale. In 1900 relief works were opened in ample time; the attendance on them was far higher than in the previous famine; and the distress that would otherwise have ensued was thus to a great extent averted. The area affected was 3,052 square miles with a population of about 493,000 persons; and in all, 1,134,287 persons (in terms of one day) received relief in return for work and 516,490 persons gratuitously, the expenditure from public funds being 2·3 lakhs. The distress was most acute in the centre and west of the District, but, as far as is known, there were no deaths from starvation.

District sub-divisions and staff.

In 1902 the District was divided into 2 sub-divisions with head-quarters at Rānchi and Gumla, and in 1905 a third sub-division was formed with head-quarters at Rāmti. The staff at head-quarters subordinate to the Deputy Commissioner consists

of a Joint and 5 Deputy Magistrate-Collectors, while the Gumla sub-division is in charge of a Joint, and the Khunti sub-division of a Deputy Magistrate-Collector.

The chief court of the District, both civil and criminal, is that of the Judicial Commissioner, who is the District and Sessions Judge. The Deputy Commissioner has special powers under section 34 of the Code of Criminal Procedure to try all cases not punishable with death. The civil courts include those of the Deputy Collectors who try all original rent suits, of 2 Munsifs at Ranchi and Gumla, who have also the powers of a Deputy Collector for the trial of rent suits, and of a special Subordinate Judge for the combined Districts of Hazaribagh and Ranchi. The most common crimes are burglaries and those which arise from disputes about land: the latter are very frequent owing to the unsettled nature of rights and areas, the ignorance of the common people and the greed of indifferent and petty landlords. Murders are unusually frequent, as the aboriginal inhabitants are heavy drinkers, believe in witchcraft and have small regard for life.

The country was originally in the sole possession of the aboriginal settlers, whose villages were divided into groups or *pāras* each under its *manki* or chief. These chiefs were subsequently brought under the domination of the Nāgbansi Rājās, who became Hinduized and by degrees lost sympathy with their despised non-Hindu subjects. The Rājās in course of time made extensive grants of land for the maintenance of their relatives, military supporters and political or domestic favourites, who fell into financial difficulties, and admitted the *dikkus* or alien adventurer to prey upon the land. To one or other of these stages belong all the tenures of the District. They are very numerous, but can be generally classified under four heads; the Rāj or Ohotā Nāgpur estate; tenures dependent on the Mahārājās and held by subordinate Rājās; maintenance and service tenures; and cultivating tenures. The second and third classes of tenures are held on a system of succession peculiar to Ohotā Nāgpur, known as *putra-putradik*, which renders them liable to resumption in case of failure of male heirs to the original grantees. As the Ohotā Nāgpur Rāj follows the custom of primogeniture, maintenance grants are given to the near relatives of the Mahārājā. The chief service grants are: *bāraik* given for military service and the upkeep of a militia; *bhuiyā*, a similar tenure found in the south-west of the District; *chdur* for work done as *ātwañ*; *ghātwañ* for keeping safe the passes; and a variety of revenue-free grants, *brāhmottar* or grants to Brāhmins, and *debottar* or lands set apart for the service of idols. Cultivating tenures may be classified as privileged holdings, ordinary *ryoti* land, known as *rajhas*, and proprietors' private land or *manjhihas*. The privileged holdings are those which were in the

Civil and
criminal
justice.

Land re-
venue.

cultivation of the aboriginal settlers before the advent of the Hindu landlords and the importation of cultivators alien to the village. They include *bhuinhari*, with the cognate (tenure known as *bhutkhet*) (land set aside for support of devil propitiation), *delikatari*, *pahnai* and *mahati*. These last are lands held by the *pahn* and *mahato* the village priest and headman. In some parts the privileged lands of the old settlers are known as *khat-khatti* and include the *pahn khunt*, *munda khunt* and the *mahato khunt*. The *munda* is the village chief responsible for the payment of the *khuntkhatti* rents to the *mandi* of the circle of the villages, while the *mahato*, a later importation, is the headman from the point of view of the Hindu landlord, whose interests he guards by assisting in the realisation of the rent of the *rajhas* and cultivation of the *manjithas* lands. These latter include *bethkhet* or land set aside for the provision of labour for cultivation of the remaining private lands. As in other parts of Bengal, attempts to add to private lands are constantly made, but the tendency received a salutary check from the demarcation, mapping and registering of *bhuinhari* and private lands under the Chota Nagpur Tenures Act of 1869. By the original custom of the country, now gradually passing away, rent was as a rule assessed only on the lowlands or *dous*. On an average of 10 villages in the Government estates in 1897, the rates per acre for low lands were found to range between R. 1-2-8 and Rs. 2-1-6 and for high lands between $1\frac{1}{2}$ and 4 annas. These rates are very much lower than those prevalent in zamindari villages, where Rs. 8 to Rs. 10 is often charged for an acre of first class low land. The uplands, when not paying cash rent, are usually liable to the payment of produce rent known as *rakumda*, which vary a good deal in different parts, and the cultivators are liable to give a certain amount of free labour (*beta begar*) to the landlord. The following table shows the collections of land revenue and total revenue, under the principal heads, in thousands of rupees:—

	1880-81.	1890-91.	1900-01.*	1903-04.
Land revenue	95	1,06	43	52
Total revenue	4,91	7,14	5,08	6,61

Local and
municipal
govern-
ment.

Outside the municipalities of Ranchi and Lohardaga local affairs are managed by the District board. In 1903-04 its income was Rs. 1,12,600, including Rs. 83,000 derived from rates, and its expenditure was Rs. 1,09,000, the chief items being Rs. 50,000 spent on civil works and Rs. 39,000 on education.

* The diminution in the receipts is due to the fact that Palamu was formed into a separate District in 1892.

The District contains 13 police stations and 16 outposts, and in 1903 the force subordinate to the District Superintendent of Police consisted of 3 inspectors, 33 sub-inspectors, 42 head constables and 352 constables; there was, in addition, a rural police force of 24 *daffadars* and 2,442 *chaukidars*. The District jail at Ranchi has accommodation for 217 prisoners and a subsidiary jail at Gumla for 21. Police and jails.

Education is backward, only 2·7 per cent. of the population (5·1 males and 0·5 females) being able to read and write in 1901. Great progress is now being made, and the number of pupils under instruction rose from 12,569 in 1892-93 to 19,182 in 1900-01, while in 1903-04, 19,074 boys and 2,514 girls were at school, being respectively 22·0 and 2·7 per cent. of the children of school-going age. There were in that year 857 schools, including 16 secondary, 825 primary and 17 other special schools. The most important of these are the District schools, the German Evangelistic Lutheran Mission high school, the first-grade training school, the Government industrial school and the blind school, all in Ranchi town. The expenditure in 1903-04 was Rs. 1,55,000, of which Rs. 19,000 was derived from Provincial revenues, Rs. 38,000 from District funds, Rs. 700 from municipal funds, Rs. 22,000 from fees and Rs. 75,000 from other sources. Education.

The District contains 6 dispensaries, of which 3 possess accommodation for 49 in-patients; the cases of 18,348 out-patients and 369 in-patients were treated in 1903, and 768 operations were performed. The expenditure was Rs. 18,000, of which Rs. 1,100 was contributed by Government, Rs. 1,000 by District funds, Rs. 5,000 by local funds, Rs. 3,000 by municipal funds and Rs. 8,000 was obtained from subscriptions. The principal institution is the Ranchi dispensary. A small leper asylum at Lohardaga is conducted by the German mission. Medical.

Vaccination is compulsory only in municipal areas, but good progress is being made throughout the District, and in 1903-04 the number of persons successfully vaccinated was 43,000, or 37·3 per thousand of the population. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi, 1877; F. A. Slacks, *Report on the Settlement of the Estate of the Maharaja of Chota Nagpur*, Calcutta, 1886; B. C. Basu, *Report on the Agriculture of the District of Lohardaga*, Calcutta, 1890; *Papers relating to the Chota Nagpur agrarian disputes*, Calcutta, 1890; E. H. Whitley, *Notes on the dialect of Lohardaga*, Calcutta, 1896; F. B. Bradley-Birt, *Chota Nagpur*, 1903.]

Ranchi Sub-division.—Head-quarters sub-division of the Bengal District of the same name situated between 22° 38' and 23° 43' N., and 84° 27' and 85° 54' E., with an area of 2,366 square miles. The sub-division consists of an elevated undulating table-land, where permanent cultivation mostly takes place in the

terraces cut in the slopes of the depressions which lie between the ridges. Its population was 753,236 in 1901, compared with 730,042 in 1891, the density being 215 persons per square mile. In that year it comprised 3,506 square miles, but owing to the formation of the Khunti sub-division in 1905, the area was reduced to 2,306 square miles with a population of 527,829 and a density of 223 persons to the square mile. The sub-division contains 2 towns, RANCHI, its head-quarters (population 25,370), LOHARDAGA (6,133) and 1,417 villages.

Gumla Sub-division.—South-western sub-division of the Ranchi District of Bengal, situated between $22^{\circ} 20'$ and $23^{\circ} 33'$ N. and $84^{\circ} 2'$ and $85^{\circ} 6'$ E., with an area of 3,622 square miles. The sub-division is part of the undulating elevated plateau of Chota Nagpur, but to the west and south the surface is more broken, the hills are steeper and the valleys are replaced by ravines. The plateau falls away to the south, while the level of the country rises, and there is another and higher plateau, to the west. Its population was 431,689 in 1901, compared with 398,243 in 1891, the density being 120 persons per square mile. The sub-division contains one town PALKOT (3,246) and 1,157 villages, one of which, GUMLA, is the head-quarters.

Khunti Sub-division.—South-eastern sub-division of the Ranchi District, Bengal, with an area of 1,140 square miles. The sub-division, which was created in 1906, is an elevated tableland, but to the south the surface is broken and the undulating ridges and valleys give place to steep hills and ravines, terminating in a comparatively open plain to the south-east towards Manbhum. It had a population in 1901 of 225,407, compared with 198,730 in 1891, the density being 198 persons to the square mile. It contains one town, BUXRO (5,469) and 599 villages, one of which, KHUNTI, is its head-quarters.

Bāndu.—Town in the Khunti sub-division of the Ranchi District of Bengal, situated in $23^{\circ} 10'$ N. and $85^{\circ} 36'$ E. Population (1901) 5,469. Bāndu is the centre of the lac industry in the District and a flourishing trade centre.

Chutiā.—Village in the head-quarters sub-division of Ranchi District, Bengal, situated 2 miles east of Ranchi town in $23^{\circ} 21'$ N. and $85^{\circ} 21'$ E. Population (1901) 388. Chutiā was at one time the seat of the Nagbansi Rājās, and this circumstance gave to their territory the designation of Chotā (a corruption of Chutiā), Nagpur.

Gumla Village.—Head-quarters of the sub-division of the same name in the Ranchi District of Bengal, situated in $23^{\circ} 2'$ N. and $84^{\circ} 33'$ E. Population (1901) 777. It is a flourishing trade centre.

Khunti Village.—Head-quarters of the sub-division of the same name in the Ranchi District, Bengal. Population (1901) 1,446. It is a trade centre of some importance on the road from Ranchi to Chaibasa.

Lohardagā.—Town in the head-quarters sub-division of Ranchi District, Bengal, situated in $23^{\circ} 26' N.$ and $84^{\circ} 41' E.$, 47 miles west of Ranchi town. Population (1901) 6,123. Lohardagā was until 1840 the head-quarters of the District, which was formerly called after it. It was constituted a municipality in 1888. The average income for the decade ending in 1901-02 was Rs. 4,600 and the expenditure Rs. 3,700. In 1903-04 the income was Rs. 4,400, half of which was obtained from a tax on persons (property tax), and the expenditure was Rs. 4,700. A small leper asylum is maintained by a German mission.

Marang Baru.—Hill on the edge of the plateau of the Hazāribāgh District of Bengal, situated in $28^{\circ} 33' N.$ and $85^{\circ} 27' E.$, on the boundary line between Hazāribāgh and Ranchi Districts. It rises 2,400 feet above the valley of the Damodar and 3,445 feet above sea-level. It is an object of peculiar veneration to the Mundās, who regard Marang Baru as the god of rainfall, and appeal to him in times of drought or epidemic sickness.

Palkot.—Town in the Gumla sub-division of Ranchi District, Bengal, situated in $23^{\circ} 52' N.$ and $84^{\circ} 39' E.$ Population (1901) 3,246. It is one of the principal trade centres in the District, is the head-quarters of a police circle, and has given its name to one of the *parganas* of the District.

Ranchi Town.—Head-quarters of the Bengal District of the same name and also of the Commissioner of the Chotā Nāgpur Division, situated in $23^{\circ} 23' N.$ and $86^{\circ} 20' E.$ on the Chotā Nāgpur plateau, 2,100 feet above sea-level. Population (1901) 25,970 (including 2,844 within cantonment boundaries), of whom 12,968 were Hindus, 7,547 Musalmāns, 3,040 Christians and 1,807 Animists. Ranchi is a station of the Lucknow division of the Eastern command, and the wing of a native infantry regiment is stationed in the cantonments (formerly known as Dorunda cantonments) which lie 2 miles to the south of the town; the town is also the head-quarters of the Chotā Nāgpur Volunteer Mounted Rifles, the Superintending Engineer of the Western Circle and the Executive Engineer of the Chotā Nāgpur Division. It is connected by good metalled roads with Purulia, Hazāribāgh and Chaibasa, and is a large trade centre. It is the chief seat of Christian missionary enterprise in Bengal and is the head-quarters of 3 important missions (see Ranchi District). Ranchi was constituted a municipality in 1860. The average income for the decade ending in 1901-02 was Rs. 23,000 and the expenditure Rs. 22,000. In 1903-04 the income was Rs. 35,000, mainly derived

from a tax on houses and lands and a conservancy rate, while the expenditure was Rs. 32,000. The natural drainage of the town is excellent, and plenty of good water can be obtained from wells. The town contains the usual public buildings; the District jail has accommodation for 217 prisoners, who are employed on the manufacture of oil and of rope from alao fibre. The most important schools are the District school, with 328 pupils on its rolls in 1902; the German Evangelistic Lutheran Mission high school, intended chiefly for the education of Christian converts, with 280 pupils; the first grade school for vernacular teachers with 22 pupils; the Government industrial school and the blind school. In the industrial school the pupils, who in 1902 numbered 50, get stipends varying from R. 1 to Rs. 3 per month and are taught carpentering and black-smiths' work, etc., together with a certain amount of reading, writing, free-hand drawing, elementary arithmetic and practical geometry. The course of instruction at the blind school, which had 20 pupils, includes reading by means of raised type representing letters, cane-work, *sewdi* weaving, and mat-making. It is proposed to build a large asylum for European and Eurasian lunatics from Northern India at Ranchi.

Sāru.—Hill in the Gumla sub-division of Ranchi District of Bengal, situated in $23^{\circ} 30'$ N. and $84^{\circ} 28'$ E. It is 3,615 feet above sea-level and is the highest peak on the Chotā Nagpur plateau.

Palāman ("a place of refuge").—District of Bengal, lying between $23^{\circ} 30'$ and $24^{\circ} 30'$ N., and $83^{\circ} 20'$ and $84^{\circ} 58'$ E. with an area of 4,914 square miles. It is bounded on the north by the Shāhabād and Gaya Districts; on the east by Gaya; Hazāribāgh and Ranchi; on the south by Ranchi and the Tributary State of Surgujā, and on the west by Surgujā and the Mirzāpur District of the United Provinces.

The District consists of a confused aggregation of hills, offshoots from the Chotā Nagpur plateau, and of the valleys between them. The hills run in the main east and west, though many are at right angles to the general trend. They are highest in the south, where they adjoin the Surgujā plateau, and gradually decrease in size towards the north. The District comprises four distinct tracts, which are roughly coterminous with the four old fiscal divisions or *parganas*. By far the largest is *pargana* Palāman, which forms the greater portion of the District and consists of jungle-od hills and fertile but narrow valleys. *Pargana* Tori is an undulating but in many places highly cultivated tract with a few large isolated hills; until recently it formed part of the head-quarters sub-division of Ranchi District, and its tenures, people and customs are quite distinct from those of Palāman. *Pargana* Boleunjā in its southern portion closely resembles Palāman, but towards the north it sinks into an extremely fertile

valley into which the Son yearly overflows. *Pargana Japla*, in the extreme north of the District, is a tract almost devoid of hills and very similar to the alluvial portion of the District of Gaya. The Son flows along the northern border, but the most important river is the Koel. This rises in Barwa in the Rānchi District, and after flowing nearly due west for about 24 miles, turns northwards, passes through the centre of Palāmau, and joins the Son not far from the old fort of Rohtāgarh; its chief affluents are the Aurangā and the Amānat. The Kanhar flows in a north-westerly direction along the Surgujā boundary, and eventually joins the Son in Mirzāpur District.

The characteristic formation of Palāmau is gneiss, of which Geology. all the more important hill ranges are composed. It is of extremely varied constitution, and includes granitic gneisses, mica schists, magnetite schists, huge beds of crystalline limestone, etc. Along the north-west boundary of the District is the eastern termination of a large outcrop of Bijāwar slates, which extends westward for nearly 200 miles through Mirzāpur and Rewah. The Lower Vindhya, which rest unconformably upon the Bijāwar, are found along the valley of the Son, where representatives of the Garhbandh, porcellanic and Khinjua groups are found; the first mentioned contains two sub-divisions, a lower one consisting of conglomerates, shales, limestones, sandstones and porcellanites, and an upper band of compact limestone of 200 or 300 feet in thickness. The rocks of the porcellanic group, which overlies the Garhbandh, are indurated highly siliceous volcanic ashes; their thickness increases as they approach the former centres of volcanic activity in the neighbourhood of Kutumbā, Nabinagar, and Japla. The shales and limestones of the Khinjua group are mostly concealed by alluvium along the banks of the Son. As the Vindhya are unfossiliferous, their geological age cannot be exactly determined, but there is reason to think that they may be as old as Cambrian.

The next formation, the Gondwāna, contains numerous fossil plants, which determine its age partly as upper palæozoic and partly as mesozoic. It is of great economic importance on account of the coal and iron ore which it contains. It comprises in Palāmau the Mahādeva, Pānehet, Rāniganj, Barākar and Tāloher divisions. The rocks of this formation generally weather into low undulating ground, but those of the Mahādeva group rise into lofty hills. The coal seams are restricted to the Barākar and Rāniganj groups, which consist of alternating layers of shale and sandstone; the workable seams are found chiefly in Barākar. The Pānehet and Mahādeva groups consist principally of sandstones, and the Tāloher mostly of shales; the Tāloher, which are the oldest Gondwāna rocks, contain at their base a conglomerate, consisting of large boulders embedded in clay, which

is supposed to be of glacial origin. The Aurangā, Hutar, and Daltonganj coal-fields are situated entirely in Palāman, which also contains the western extremity of the large Karanpurā field. The boundaries of the coal-fields are usually faults, whose position is indicated by lines of siliceous breccia, and hot sulphurous springs are frequent along them. The best coal is that of the Daltonganj field.

Near the southern edge of the District, the lofty flat-topped hills known as *pāts* are capped by great masses of lavas resulting from the decomposition of basaltic beds of the Deccan trap formation. The largest of these is the vast Netajit plateau west of the Koel river. A few intrusive dykes of the same formation occur in the Daltonganj and Hutar coal-fields.

Along the Son, especially below its confluence with the Koel, the rocks are concealed by deep alluvium which merges into the alluvial formation of the Gangetic plain. Alluvial soil is scattered over many other parts of the District and nearly everywhere contains in great abundance the calcareous concretions known as *kankar*.

Botany.

The rice fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is often prominent. The steeper slopes are covered with a dense forest mixed with many climbers. *Sāl* (*Shorea robusta*) is gregarious; among the other noteworthy species are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adina*, which these forests share with the similar forests on the lower Himalayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Sonneratia*, *Dawsonia*, *Hardwickia* and *Bassia*, which do not cross the Gangetic plain. One of the features of the flowering trees is the wealth of scarlet blossom in the hot weather produced by the abundance of *Butea frondosa* and *B. superba*.

Fauna.

The chief wild animals to be met with are tiger, bison, leopard, panther (very rare), black bear, sambar, chitra (spotted deer), chinkārā, four-horned deer, barking deer, nilgai, black buck and wild dogs. The Government reserved forests form a shelter for game, and though tigers have probably diminished in number of late years, bison and deer have considerably increased in spite of the ravages committed by wild dogs.

* Detailed descriptions of the Geology of Palāman have been published in the Memoirs of the Geological Survey; the Hutar and Aurangā coal-fields, the rocks and the iron ores have been described by V. Ball, in vol. xv, part i; the Daltonganj coal-field by Th. Hughes in vol. viii, part ii; the Karanpurā coal-field by Th. Hughes in vol. vii, part iii; the Lower Vindhya generally by E. Mallet, vol. vii, part i; and the volcanic rocks of that series by E. Fredenburg, vol. xxix, part i.

Palāman enjoys a moderate temperature, except during the hot weather months of April, May and June, when the westerly winds from Central India cause great heat, combined, however, with very low humidity. The mean temperature increases from 74° in March to 86° and 94° in April and May, the mean maximum from 88° in March to 107° in May and the mean minimum temperature from 69° in March to 81° in June. During these months humidity is lower in Ohotā Nāgpur than in any other part of Bengal, falling in this District to 57 per cent. in March, 46 per cent. in April and 61 per cent. in May. The mean temperature for the year is 77°, falling to 61° during the cold weather, when the minimum temperature is 47°. The average annual rainfall is 49 inches, of which 6½ inches fall in June, 14 each in July and August and 8 in September.

Reliable history does not date back beyond 1603, when the Raksel Rājputs were driven out by the Cheros under Bhagwant Rai, who took advantage of the local Rājā's absence at a ceremony at Surgujā to raise the standard of revolt. The Chero dynasty lasted for nearly 200 years, the most famous of the line being Medni Rai surnamed "the just," who ruled from 1658 to 1672 and extended his Rāj into Gayā, Hazāribāgh and Surgujā. The erection at Palāman of the older of the two forts which form the only places of historical interest in the District is ascribed to him; the other, which was never completed, was begun by his son. These Rājās apparently ruled as independent princes till between 1640 and 1680, when the Muhammadans made several attacks on them and forced them to pay tribute. In the latter year occurred the attack on Palāman fort and its capture by Daud Khān, which forms the subject of a large picture (30 feet by 12) preserved by Daud's descendants and described in detail by Colonel Dalton in the *Journal, Asiatic Society of Bengal*, 1874. In 1722 the ruling Rājā Ranjit Rai was murdered, and Jay Kishan Rai, descended from the younger son of a former Rājā, was placed upon the throne. A few years afterwards Jay Kishan was shot in a skirmish, and his family fled to Megrā in Bihār. Here they took refuge with one Udwant Rām, a *kānungo*, who in 1770 took Gopāl Rai, grandson of the murdered Rājā, to Patna and presented him to Captain Camac, the Government Agent, as the rightful heir to the Palāman Rāj. Captain Camac promised the assistance of the British Government and, after defeating the troops of the ruling Rājā, gave a *sanad* for 5 years to Gopāl Rai and 2 of his consins. From this time Palāman was included in the British District of Rāmgarh. A year or two later, Gopāl Rai was sentenced to imprisonment for being concerned in the murder of the *kānungo* who had helped him to power. He died at Patna in 1784, and in the same year died Basant Rai, who had succeeded to the *gaddi* on his imprisonment. Churāman Rai succeeded; but

by 1813 he had become insolvent, and Palāman was sold for arrears of revenue and bought in by Government for the amount due. Only 8 years later old disturbances between the Kharwāra and Cheros were renewed, and Palāman was given to the Deo family in Gayā as a reward for their services in helping to quell them. Their regime, however, was unpopular, and in a year the country was in open rebellion. So Government was again forced to take up the management of the estate, giving the Deo family as compensation a reduction of Rs. 3,000 in the Bihār revenue payable on their estates in Bihār. In 1832 the Kharwāra and Cheros again broke out in rebellion, but this rising was soon put down and there were no further troubles until the Mutiny of 1857, when the Kharwāra rose against their Rājput landlords; and the mutineers of the Rāmgarh battalion, taking refuge in Palāman, made common cause with Nilambar and Pitambar Singh, two malecontent land-holders. The 26th Madras Native Infantry and a portion of the Rāmgarh battalion which had remained loyal defeated the insurgents at the Palāman forts. Nilambar and Pitambar Singh were taken prisoners and hanged. In 1834 Palāman was included in the District of Lohārdagā (now Rānchī) and was only formed into a separate District in 1892.

The population of the present area increased from 423,795 in 1872 to 561,075 in 1881, to 596,770 in 1891 and to 619,600 in 1901. The striking increase between 1872 and 1881 is attributable partly to the greater accuracy of enumeration in 1881 and partly to the impetus given to enlightened management of estates, and consequently to the extension of cultivation, which followed the settlement of the Government estates made in 1869-70. The northern part of the District is healthy, but not the southern portion. The population is contained in 3,184 villages and 2 towns, DALTONGANJ, the head-quarters, and GARWA. The District is very sparsely inhabited, the number of persons to the square mile being only 126. The density is greatest in the alluvial valleys along the course of the north Koel and Amānat rivers and on the right bank of the Son; elsewhere, and especially in the south and west, the country is wild and inhospitable; and is inhabited mainly by forest tribes, who eke out their precarious crops of oilseeds, maize and cotton with the blossoms of the *wahud* tree and other products of the jungle. There is some emigration to Assam; only 7,000 persons enumerated there in 1901 were entered as natives of Palāman, but it is believed that owing to the recent creation of the District, many of the Palāman emigrants returned their birthplace as Lohārdagā and were therefore assigned to the category of those born in Rānchī. All but about 6 per cent. of the population speak Hindi, in most cases a patois of the Bhojpuri dialect known as Nāgpurī, which has borrowed some of its grammatical forms from Chhattisgarhī; 3·5 per cent.

The
people.

talk Oraon, a language of the Dravidian family, and 2·7 per cent. speak dialects of the Mundā family, chiefly Mundāri, Birjia and Korwā. Of the population 86 per cent. are Hindus, 8·4 per cent. Muhammadans and 4·2 Animists. Those returned as Hindu include large numbers of semi-Hinduised aborigines.

The largest tribes and castes are Bhuiyās (73,000), Kharwārs (42,000), and Ahīrs; among other Dravidian tribes distinctive of this neighbourhood may be mentioned the Bhogtās, Korwās, Nagesias and Parhaiyās. The Cheros were at one time a dominant race in south Bihār; they are known in the Palāmau District as "the 12,000," it being popularly asserted that at the beginning of their rule in Palāmau they numbered 12,000 families. Agriculture supports 72 per cent. of the population, industries 11·7 per cent. and the professions 0·8 per cent.

Christians number 7,908, of whom 7,897 are natives. Nearly all reside in the Mahuādānd thāna, where a Roman Catholic mission is at work and has built a church and school.

The *rabi* and *bhadoi* crops, especially the former, are very precarious owing to the lightness and uncertainty of the rainfall, and the rapidity with which all water runs off to the main streams. The rice crop is even more precarious, except where means of storing up water to irrigate the fields have been provided. A few of the more enlightened zamīndārs have done a great deal to this end by throwing embankments across the natural slope of the country and diverting small streams to fill these rude reservoirs; much has also been done by Government in the estates under its direct management. Rice lands have all to be laboriously constructed by terracing off favourable hollows or filling up the beds of streams with the earth from their banks. For agricultural purposes the District consists broadly of two interlacing zones. The first consists of the valleys of the Amānat, the Kōel and the Son, and contains stretches of fertile clay covered with paddy, sugarcane and various *rabi* crops. The second comprises the hilly areas which are generally covered with a thin loose gravelly soil; and the population is chiefly dependent for its sustenance on the *bhadoi* crops. The most fertile soil is a black friable clay known as *kesāī*, found in abundance in the valleys and also, though without any great depth, in the uplands. It is very retentive of moisture and produces good crops of paddy, wheat, and barley; in many cases *khesāri* (*Lathyrus sativus*) is grown on it after the rice has been harvested.

In 1903-04 the cultivated area was estimated at 577 square miles, current fallows at 588 square miles and other culturable waste at 1,072 square miles. Rice, which is the staple crop in the valleys, is grown on 288 square miles, the winter crop being the most important; maize covers 55 square miles, while other cereals, including *marua*, gram, barley, wheat, millets such as *kodon*, *sācān*

and *gondli*, and pulses, chiefly *rakar* and *khesari*, cover an area of 335 square miles. The chief miscellaneous crops are sugarcane, oilseeds, cotton and poppy.

Improvements in agricultural practice.

Cultivation is extending fast, and it is estimated that in the Government estates the increase amounted to 8 per cent. in the seven years ending with 1903. In private estates the farther spread of cultivation depends on the degree to which the individual landlords attend to the wants of their ryots in the matter of irrigation. Sporadic attempts have been made to improve the quality of crops by the selection of seed, but greater success has attended the introduction of new varieties, and sugarcane, chillies, linseed, potatoes and gram are being grown more extensively than they were a few years ago. No use was made of the Land Improvements and Agriculturists' Loans Acts till 1896, but in the six following years Rs. 1,40,000 was advanced, most of which has been recovered. In 1902-03 the operations were further extended, Government advancing Rs. 20,000 to zamindars under the former and Rs. 38,000 to tenants under the latter Act.

Cattle.

The cattle are poor; they are grazed in the jungles, and in the hot weather months large numbers are sent to the high lands in the south and south-west and to the Surguja State, where pasture is abundant.

Irrigation.

Irrigation is almost confined to the construction of reservoirs or *bandhs*, the more useful and valuable of which are filled by the waters of diverted streams. Great skill is often shown in planning and carrying out these schemes, and water is frequently carried by means of rude channels and raised embankments for a distance of 6 or 7 miles. These works are extraordinarily remunerative and seldom yield a profit of less than 20 to 25 per cent. It is estimated that half the area under rice is irrigated in this manner; practically the only other crops irrigated are sugarcane, poppy, chillies and garden produce.

Forests.

The District contains 260 square miles of forest, of which 188 square miles are reserved forest under the management of the Forest department, and the remainder are protected forests under the control of the Deputy Commissioner. The latter comprise the surplus area left in each Government village after allotting to the tenants twice as much waste as there is cultivated land for extending cultivation. The reserved forests lie chiefly in the south of the District, the Barasand, the largest block, extending over 85 square miles to the south of the Koel river. The most valuable tree is the *sal* (*Shorea robusta*), which grows best in the more fertile soil along the foot of the hills. It is here found in places almost pure; higher up mixed species become more abundant, and on the sides and tops of the hills, where the soil is poorer, *sal* ceases to exist. Other valuable trees

are satin wood (*Chloroxylon swietenia*), ebony (*Diospyros melanoxylon*) and black wood (*Dalbergia latifolia*), which are found in the mixed forest above the *sāl*, but not in sufficiently large size to ensure a steady revenue. The majority of the forests are remote from the railway, and revenue is at present chiefly derived from bamboos, which are generally sold at Rs. 2 per 1,000. Other minor products of limited importance are *sabai* grass (*Ischnum angustifolium*), lac and the fruit of the *mahuā* tree; gum kino is being experimentally extracted from the *Pterocarpus marsupium* for use in dyeing and tanning. The receipts from the reserved forests in 1903-04 were Rs. 5,000. There are extensive private forests, but these are as a rule less valuable than those belonging to Government, the landlords having only lately begun to preserve them. Plantations of *mahuā*, teak, mahogany, *kushm* and *divi-divi* plants have been made, but have not as yet gone beyond the experimental stage.

The most important coal-field is that of Daltonganj, where the coal-bearing rocks in the valley of the North Koel river extend over an area of about 30 square miles and the coal contains a good proportion of carbon. The Aurangā field has an area of 97 square miles and contains numerous coal seams, some of large size, but the quality of the coal is indifferent. The Rutar field, which lies to the west of the Aurangā, has an area of about 79 square miles; the coal is somewhat inferior to that of Daltonganj. The Barun-Daltonganj branch of the East Indian Railway now taps the Daltonganj field and has brought the coal within reach of Cawnpore and other large manufacturing centres in the United Provinces. Mines were opened in 1902 at Rājbara and Singrā; the former mine was first worked in 1857, but it had been closed owing to difficulties of transport. The coal is worked by means of pits and inclined planes; the output in 1903 was 34,000 tons and on the average 1,200 hands were employed; the labourers are for the most part Oheros and other local men. An immense quantity of iron ore is found all over the District, especially in the neighbourhood of the coal-fields. It is of three kinds: magnetite occurring in the gneiss, siderite with brown and red hematite in the Gondwāna, red and brown hematite in the laterite. The ores from the Gondwāna are the most valuable. At present they are worked only to a small extent by some of the jungle tribes, and the outturn is barely enough to satisfy local requirements. Limestone, sandstone, laterite and graphite also exist, but difficulties of transport have hitherto prevented their being utilized. Copper has been found, but not in sufficient quantities to be profitably worked.

Arts and manufactures exist only in the most primitive form, and artisans do no more than supply the local demand for coarse cloth, brass utensils, silver and lac ornaments of the rudest kind, blankets, *lat* cloths for pack-bullock bags, rude country guns which

Minerals.

Arts and manufactures.

sell at R. 1 for each span length of the barrel, and steel and iron for the manufacture of ploughs and *tangia*, a rude kind of axe. *Gha* is made, *taser* silkworms are reared, and *lao* is produced for export.

Commerce. The principal exports are hides, *lao*, *gha*, oilseeds, bamboos, catechu and coal; while the chief imports are European piece-goods, salt, brassware, sugar, tobacco, kerosene oil and rice; *gha*, mustard and hides are brought in from Surguja. Except in the neighbourhood of the railway stations, where carts are used, the trade is carried by pack-ballocks. Most of the exports are sent in the first instance to Gaya or Dinapore. The chief trade centres are Garwā, Daltonganj, Hariharganj, Husainabad, Pathra and Chandwā. Barter is a common form of trading and affords great opportunities for profit to the middleman.

Railways and roads. The Daltonganj section of the East Indian Railway (opened in 1902) runs for 55 miles within the District. The District contains 322 miles of road (of which 26 are metalled), and 38 miles of village tracks. The principal lines of road are from Daltonganj to Gaya District via Hariharganj and Manatu, to Ranchi, to the extreme south of the District through the Government forests, and to Mirzapur and Husainabad via the important market of Garwā; a good road from Garwā in the direction of Saugnā is under construction. Quicksands in the Kool and its great breadth are extremely unfavourable to the development of the country west of that river.

Famine. Palāmau was visited by famine in 1897 and again in 1900. On the former occasion the number of workers relieved was 488,063 (in terms of one day) and on the latter 219,740; the numbers gratuitously relieved were 463,941 and 81,774 respectively. In 1897, 15,000 maunds of Burma rice were imported under a Government bounty of 8 annas per maund, and the leading zamindars rendered loyal assistance in the relief of their tenants. The total expenditure by Government was Rs. 1,19,000 in 1897 and Rs. 30,000 in 1900.

Administration. The sub-divisional system has not yet been introduced, and the administration of the whole District is carried on from Daltonganj, where the staff consists of the Deputy Commissioner and 2 Deputy Magistrate-Collectors.

Justices. The principal civil and criminal court is that of the Judicial Commissioner of Chota Nagpur, who is stationed at Ranchi. The local criminal courts are those of the Deputy Commissioner and the 2 Deputy Magistrates. The Deputy Commissioner has special powers under section 34 of the Criminal Procedure Code, and is also *ex-officio* Subordinate Judge of the District. A Munaf is stationed at Palāmau for the disposal of civil work. The crimes most characteristic of Palāmau are petty dacoities, committed by the Korwa, a semi-savage tribe of the neighbouring political State of Surguja, and the poisoning of cattle for the sake of their hides.

In 1773 Palāmau *pargana* was settled with Mahārājā Gopāl Rai for 5 years at a revenue of Rs. 5,000 rising to Rs. 12,000 in the third year. It was then settled for 10 years at an annual revenue of Rs. 15,000. In 1812 the Mahārājā, Churāman Rai, was in arrears to the extent of Rs. 55,000, and the *pargana* was put up to public auction and bought in by Government for the amount due, thus becoming a Government estate. From that period to 1839, with the exception of the period during which Palāmau was given over to the Doo Rājās, the land revenue demand was Rs. 25,000 *sicce*, of which Rs. 13,000 was payable by the *jāgirdārs* under the Mahārājā and Rs. 12,000 was assessed on the *khāṭa* villages under direct management. In 1839 the *khāṭa* villages were settled with the farmer for 20 years at Rs. 12,000, and the rent payable by the *jāgirdārs* was raised to Rs. 16,000. In 1859 the *khāṭa* villages were summarily settled for 3 years for Rs. 22,000, and in 1863 a 30 years settlement was concluded with the farmer for Rs. 36,000. This arrangement continued till 1896, when a new settlement for 15 years was made direct with the ryots. At the same time the *jāgirdārs* were recognized as holders of permanently settled estates, the sum they were then paying to Government as the representative of the Mahārājā of Palāmau being fixed as the revenue payable in perpetuity. The current demand of land revenue in 1903-04 was Rs. 1,07,000, of which Rs. 27,000 was payable by 255 permanently settled estates, Rs. 1,400 by 4 temporarily settled estates and the remainder by the Government estates. The incidence of land revenue is only $4\frac{1}{2}$ annas per cultivated acre; the average rental is Rs. 2-14-4, but the amount varies with the nature of the land cultivated, the means for irrigating it and its situation in the District. The best rice land lets for Rs. 10 to Rs. 15 an acre in parts of Garwā and Patun thānas; Rs. 6 in the Government estates; and Rs. 4 to 6 in the south of the District. The best *bhadoi* and *rohi* lands fetch only Rs. 6 to Rs. 8 an acre, while in the Government estates the maximum rate is Rs. 3. In some parts as much as Rs. 10 per acre are charged for land growing sugarcane. The average area in possession of a tenant may be roughly estimated at 5-6 acres.

The following table shows the collections of land revenue and total revenue, under the principal heads (in thousands of rupees) since the formation of the District:—

		1892-93.	1900-01.	1903-04.
Land revenue	...	68	1,03	80
Total revenue	...	2,75	3,11	3,48

Local and
municipal
government.

Outside the municipality of DALTONGANJ local affairs are managed by the District board. Its income in 1903-04 was Rs. 80,000, of which Rs. 37,000 was derived from rates; while the expenditure was Rs. 96,000, including Rs. 55,000 spent on civil works.

Police and
jails.

The District contains 10 police stations and 11 outposts. The force subordinate to the District Superintendent of Police in 1903 consisted of 2 inspectors, 19 sub-inspectors, 24 head-constables and 213 constables. There was also a rural police force of 147 *daffadars* and 1,109 *chaukidars*, including 51 *ghatwallas* who are maintained to patrol the roads at the passes over the hills. A District jail at Daltonganj has accommodation for 124 prisoners.

Education.

Education is very backward, only 1.9 per cent. of the population (3.7 males and 0.1 females) being able to read and write in 1901, but since the constitution of the District in 1892 the number of pupils has increased from 4,317 to 8,338 in 1903-04, of whom 1,024 were girls. In the latter year 15.9 per cent. of boys and 2.1 per cent. of girls were at school. Of the 332 educational institutions, 11 provided for secondary and 311 for primary education, and there was a training school. The most important institution, is the high school at Daltonganj. The total expenditure on education in 1903-04 was Rs. 50,000, of which Rs. 15,000 was contributed from Provincial revenues, Rs. 19,000 from District funds and Rs. 13,000 from fees.

Medical.

The District contains 4 dispensaries, of which that at Daltonganj has accommodation for 20 in-door patients; altogether, the cases of 12,495 out-patients and 341 in-patients were treated at these institutions in 1903, and 634 operations were performed. The expenditure was Rs. 5,000, of which Rs. 1,700 was met by Government, Rs. 2,500 by local funds, Rs. 400 by municipal funds and Rs. 1,100 by subscriptions.

Vaccination.
Jan.

Vaccination is not compulsory except in Daltonganj town. In 1903-04 the number of persons successfully vaccinated was only 18,000, or 20.3 per thousand of the population. The mortality from small-pox is higher than in most Bengal Districts.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi, 1877; L. R. Forbes, *Settlement Report of Palamou*, Calcutta, 1875; B. O. Basu, *Report on the Agriculture of the District of Lohardaga*, Calcutta, 1890; D. Sander, *Settlement Report of the Palamau District*, Calcutta, 1898.]

Daltonganj:—Head-quarters of the Palamau District of Bengal, situated in 24° 3' N. and 84° 4' E. on the North Koel river. Population (1901) 5,837. The town is named after Colonel Dalton, at one time Commissioner of Chota-Nagpur. The town,

which lies to the immediate south of the Daltonganj coal-field (*see* PALAMAU DISTRICT), and is connected by a branch line with the East Indian Railway system, possesses a brisk local trade. Daltonganj was constituted a municipality in 1888. The average income for the decade ending in 1901-02 was Rs. 5,700 and the expenditure Rs. 4,900. In 1903-04 the income was Rs. 12,000, derived from various sources, such as a tax on persons (or property tax), a tax on houses and lands, the receipts from markets, and a conservancy rate, and the expenditure was Rs. 9,000.

Garwā.—Town in the Palamau District of Bengal, situated in $24^{\circ} 10' N.$ and $83^{\circ} 50' E.$ on the Dānro river. Population (1901) 3,610. Garwā is the chief distributing centre for the surplus produce of the District, and of a great part of Surgujā State. Stick lac, resin, catechu, cocoons of *tasar* silk, hides, oil-seeds, *ghi*, cotton and iron are here collected for export; the imports are food grains, brass vessels, piece-goods, blankets, silk, salt, tobacco, spices, drugs, etc. The market is held in the dry season on the sands of the Dānro river.

Manbhūm.—District of the Chotā Nāgpur Division of Bengal, lying between $22^{\circ} 43'$ and $24^{\circ} 4' N.$, and $85^{\circ} 49'$ and $86^{\circ} 54' E.$, with an area of 4,147 square miles. It is bounded on the north by the Hazārībāgh and Santāl Parganas Districts; on the east by Burdwan, Bānkurā and Midnapore; on the south by Singhbhūm; and on the west by Rānehi and Hazārībāgh. The whole of the northern boundary is marked by the Barākar river; on the north-east, the Barākar and Dāmodar separate the District from Burdwan; while the Subarnarekhā river flows along the boundary for short distances on the west and south.

Manbhūm District forms the first step of a gradual descent from the table-land of Chotā Nāgpur to the delta of Lower Bengal. The undulation so characteristic of Chotā Nāgpur here becomes less pronounced, and level tracts of considerable extent are of frequent occurrence. In the north and east the country is open, and consists of a series of rolling downs, dotted here and there with isolated conical hills. During the hot weather the scarcity of trees gives to this part of the country a scorched and dreary appearance; but in the rains the fresh green of the young rice and the varying foliage of the low jungle form contrasts of colouring with the soil, and the scenery assumes a park-like aspect. In the west and south the country is more broken and the scenery far more picturesque. Here the Bāghmundi range striking out from the plateau of Chotā Nāgpur and farther to the south the Dalmā range dividing Manbhūm from Singhbhūm stand up as commanding features in the landscape. These hills are covered almost to their summits with large and heavy forest. The principal hills are Dalmā (3,407 feet), the highest peak of the range of that name,

Boundaries, configuration, and hill and river systems.

Pānchkot or Pānchet (1,000 feet), situated to the north-east of Purūlia, and Gangabāri or Gajburn, the highest peak of the Bāghmundi plateau, situated about 20 miles south-west from Purūlia. The principal river is the Kāsai, which flows through the District from north-west to south-east and then turns almost due south as it passes into Midnapore; the total length of its course is about 171 miles. Just above Raipur the Kāsai forms rapids and several picturesque waterfalls of no great height. The DAMODAR flows through Mānblhūm in an easterly direction with a slight inclination to the south. Its chief tributary, the BARAKAR, has already been mentioned as forming part of the north-eastern boundary of the District; and the SUBARNAREKHA as dividing it on the west and south from Rānchi and Singhbhum. The only other rivers of any importance are the Dhārkisor, which rises in the east of Mānblhūm and after a short south-easterly course enters Bānkurā; and the Silai, also rising in the east of the District and flowing south-east into Bānkurā.

Geology.

The geological formations are the Archaean and the Gondwāna. The Archaean rocks consist of gneiss and crystalline schists, the gneiss occupying by far the largest portion of the District. It belongs principally to the group known as Bengal gneiss, which is remarkable for its varied composition, consisting of successive bands of intermixed granitic, granulitic and dioritic gneisses, and micaceous chloritic and hornblendic schists, with a laminated or foliated structure striking usually east and west. About the centre of the District is a great belt of unfoliated or only slightly foliated granitic intrusions, also striking east and west, and extending westwards into the adjacent District of Rānchi. Crystalline limestones occasionally occur. Along the southern boundary there exists a group of rocks resembling the Dhārwar schists of southern India, which were originally sedimentary and volcanic, but have been altered into quartzites, quartzitic sand-stones, slates of various kinds, hornblendic mica, and talcose and chloritic schists, the latter passing into potstones, green stones and epidiorites.

Quite close to the southern boundary of Mānblhūm the schists are invaded by a gigantic dyke of basic igneous rock forming an imposing east and west range, which culminates in the lofty Dalmā hill. The schists are here more metamorphosed than elsewhere with a considerable development of iron ores; in this neighbourhood, moreover, the rocks are richest in gold.

The Gondwānas, whose age as determined by fossil plants is partly upper palaeozoic and partly mesozoic, are the principal rocks from an economic point of view. They occur along the Dāmodar river and form the Rāniganj coal-field, the western portion of which lies in Mānblhūm, and the rich Jherriā coal-field almost entirely situated within the District. The Gondwāna

rocks comprise the Mahādeva, Pānohet, Rāniganj, ironstone shales, Barākar and Tāloher divisions, of which all but the first belong to the Lower Gondwāna. The series consists throughout almost exclusively of shales and sandstones. The coal seams are restricted to the Barākar and Rāniganj divisions.

The coal fields owe their preservation from denudation and their present situation to a system of faults that has sunk them amidst the surrounding gneiss. The faults are easily recognised along their boundaries, especially on the south, and sulphurous hot springs are often situated in their neighbourhood. Innumerable fissures are occupied by intrusive dykes of basalt and of mica-apatite-peridotite, the latter being frequently detrimental to the coal seams which have often been burnt away by it. These intrusions are of the same age as the volcanic rocks of the Rājmahāl hills.*

The narrower valleys are often embanked for rice cultivation, and the rice fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is often prominent. The steep slopes of the higher hills are covered with a dense forest mixed with climbers. *Sal* (*Shorea robusta*) is gregarious; among the other noteworthy species are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, *Adina*, which these forests share with similar forests on the lower Himalayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soyimda*, *Boiswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain. One of the features of the upper edge of the hills is a dwarf palm, *Phanix acanthia*; while the wealth of scarlet blossom in the hot weather produced by the abundance of *Butea frondosa* and *B. superba* is also striking. Botany.

Tigers, leopards, bears, wolves, hyenas, deer and wild dogs were formerly common but are decreasing in numbers, tigers being very rare visitors. The short-tailed Indian pangolin (*Manis crassicaudata*), which owing to its peculiar habits is one of the least known quadrupeds in India, is occasionally found in the jungles bordering on Singhbhūm. Fauna.

Temperature is moderate, except during the hot weather months of April, May and June, when the westerly winds from Climate and temperature.

* The Archaean series has been described by V. Ball, *Memoirs, Geological Survey of India*, vol. xviii, part ii; the Rāniganj coal-field by W. T. Blanford, *Memoirs*, vol. iii, part i; the Jherria coal-field by Th. Hughes, *Memoirs*, vol. v, part iii, and by Th. Ward, *Records, Geological Survey of India*, vol. xxv, part ii; the mica-apatite peridotites by T. H. Holland, *Records*, vol. xxvii, part iv.

The above account was contributed by Mr. E. Vredenburg of the Geological Survey of India.

Central India cause great heat with very low humidity. The mean temperature increases from 82° in March to 89° in April, May and June, the mean maximum from 96° in March to 101° in May and the mean minimum from 68° to 76°. The average annual rainfall is 53 inches, of which 8·9 inches fall in June, 13·4 in July, 13·2 in August and 7·8 in September.

History.

The distinctive tribe of the District is the Bhumi, who are closely allied to the Mundās and have been identified with the Bajra Bhūmi of Jain legendary history. The ancient Jains have left their traces in the ruins of temples near Purulia and several places along the course of the Kāsai and Dāmodar rivers, but we have no authentic records of this part of the country till Muhammadan times, when it was regarded as part of the Jharkand or forest tract, which is the name given in the Akbarnāma to the whole tract from Birbhūm and Panchet to Ratanpur in Central India and from Rohitāgarh in South Bihar to the frontier of Orissa. In the Bādsāhnāma the zamindār of Panchet was shown as a commander of horse under Shāh Jahān and his zamindari was subject to a fixed *poshkash*. The territory comprised in the present District of Mānbhūm was acquired by the British with the grant of the *darāni* of Bengal, Bihar and Orissa in 1765. Up to 1805 the estates contained in it were attached some to Birbhūm and some to Midnapore; but in that year they were formed with a few others into a separate District called the JUNGLE MAHALS. In 1832 one Gangā Nārāyan, a claimant to the Barābhūm estate in this District, rose in rebellion, but was driven to Singhbhūm, where he died. As a result of these disturbances, a change of administration was determined upon, and by Regulation XIII of 1833 the District of the Jungle Mahals was broken up; the estates of Senpahāri, Shergarh and Bishnupur were transferred to Burdwan, while the remainder, with the estate of Dhalbhūm detached at the same time from Midnapore, were formed into the present District of Mānbhūm, which was withdrawn from the regular system of administration and placed under an officer called the Principal Assistant to the Agent to the Governor-General for the South-West Frontier. Subsequently by Act XX of 1854 his title was changed to Deputy Commissioner, and that of the Governor-General's Agent to Commissioner of Chota Nagpur. Dhalbhūm had again been transferred to Singhbhūm 8 years previous to this, and the District of Mānbhūm was reduced to its present area by further transfers of minor importance in 1871 and 1879. When the District was first constituted, the civil station was fixed at Mānbazar, but it was transferred to Purulia in 1838. During the Mutiny of 1857 the military garrison at Purulia, which consisted of 61 sepōys of the Rāmgarh battalion and 12 sowārs, all Hindustānis, rose, looted the Treasury, released the prisoners

in the jail, burnt the records, and then marched off towards Ranchi.

The District contains several interesting archaeological remains. The most ancient of these are ascribed to the Jain Śārāks, including ruins at PALMA, CHARNA, Pākhirā, where a temple, belonging probably to the seventh century, contains a statue of the Jain hierarch Arnanāth, and Deoli, where there is a group of temples, one containing a fine Jain figure now also known as Arnanāth. Instances of early Brahmanical architecture occur in the villages of Pāra and Katrās. A group of temples at Tekpur on the Dāmodar belongs apparently to the early part of the Muhammadan period. Other interesting ruins exist at DALMI, BORAM and PANCHET.

The population rose from 820,521 in 1872 to 1,058,228 in 1881, to 1,193,328 in 1891 and to 1,301,364 in 1901. This rapid growth is due mainly to the healthiness of the climate and the fecundity of the aboriginal tribes who form the bulk of the inhabitants; in 1881 it was also due in part to better enumeration, while in modern times the natural increase has been assisted by the opening up of the country by railways and the growth of the coal industry. Blindness and leprosy are exceptionally common. The salient statistics of the census of 1901 are reproduced below:—

SUB-DIVISION.	Area in square miles.	NUMBER OF		Population.	Population per square mile.	Percentage of variation in population between 1871 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Purulia	2,361	3	4,873	1,021,212	246	+ 5.4	42,000
Gohulpur	873	...	1,244	272,123	313	+ 21.1	36,104
DISTRICT TOTAL	4,167	3	2,691	1,301,364	311	+ 9.1	78,104

The three towns are PURULIA the head-quarters, JHALIDA and RAQHUNATHPUR. The density is greatest in the alluvial tract along the banks of the Dāmodar; in the broken country in the north-west and south the inhabitants are fewer, except in the neighbourhood of the great Jherriā coal-field, where the mines attract large numbers of coolies. The Jherriā and Topohānchi thānas in the north-west contain the bulk of the collieries, and grew by 75 and 30 per cent. respectively during the decade ending in 1901, accounting between them for over 45 per cent. of the total increase. A large number of immigrants, chiefly from Hazāribāgh, Bihār and the United Provinces, come to work in the mines, but the emigrants, more than half of whom were enumerated in Assam, exceed the immigrants by over

74,000. The vernacular of the District is the western dialect of Bengali known as *Barhi boli*. Along the western border this merges into Hindi, the dialect spoken being locally known as Karmali or Khottā, or even Khottā Bangala. Santālī is spoken by 182,000 persons. Hindus number 1,132,019 or 87 per cent. of the population, Animists 103,011 or 7·9 per cent. and Muhammadans 62,799 or 4·8 per cent.

Their
castes and
occupa-
tions.

The aboriginal element is strongly represented, the most numerous tribes being the Santāls (198,000, of whom 96,000 were returned as Hindus, and 99,000 as Animists), the Bhumij (169,000), and Koras (22,000). Many of the lower Hindu castes consist to a great extent of aboriginal elements; such are the Bouris (99,000), Bhuiyās (37,000), Rajwars (32,000) and Doris (19,000), and probably also the Kurmās (241,000); the most numerous caste in the District. Agriculture supports 67 per cent. of the population, industries 11·7 per cent. and the professions 1·3 per cent.

Christian
Missions.

Christians number 2,910, of whom 2,509 are natives. The German Evangelistic Lutheran Mission, which began work in 1804, maintains schools and also works among the lepers; while a mission of the Free Church of Scotland in the Gobindpur sub-division has a community of 700.

General
agricul-
tural con-
ditions.

The surface consists of a succession of rolling uplands with intervening hollows, along which the drainage runs off to join the larger streams. The soil is for the most part composed of hard, dry, ferruginous gravel, which has been furrowed into countless small channels by the discharge of surface drainage, but many of the lower levels are filled with good alluvial soil. The lower slopes of these uplands, and the swampy ground between, supply the only land on which a wet rice crop can be grown without elaborate levelling and embanking. The hill sides, when terraced for its cultivation, present the appearance of a series of steps varying from 1 to 5 feet in height. In some cases the beds of streams are banked up at intervals and made into long narrow rice fields.

Chief
agricul-
tural
statistics
and prin-
cipal
crops.

The salient agricultural statistics for 1903-04 are shown below, areas being in square miles:—

SUB-DIVISION.	Total.	Cultivated.	Culturable waste.	Forests.
Purulia	3,364	1,485	101	11
Gobindpur	803	470	61	4
TOTAL	4,167	1,955	162	15

It is estimated that 10 per cent. of the cultivated area is twice cropped. The most important staple is rice, which covers an area of 1,428 square miles; two principal crops are grown, *muhi* or *auri* sown broadcast as soon as possible after the first good fall of rain and reaped at the end of September, and the *haiwantik* or *āman*, which is sown in a nursery about the end of May and afterwards transplanted and finally reaped from November to January. A third, but less important crop, the summer rice or *gorādhān*, is sown broadcast in May on tablelands and tops of ridges, and is reaped in August. The first two crops are grown only on lands in which there is a good supply of water. Other important cereals are maize grown on 172 square miles, *marua*, *bājra*, wheat and barley. Green crops and pulses include gram, *mūng*, *kalai*, *rahar*, peas, *khesāri*, beans, *kurthi* and *masuri*, and are cultivated on 245 square miles. Among oilseeds rape and mustard are grown on 52 square miles, and *til* on about 16 square miles. Some sugarcane, cotton and tobacco are also grown. Rotation of crops is practised to a very limited extent. Manure is used for all crops to which the cultivator can afford to apply it. It usually consists of cow-dung, ashes, decayed leaves and grass, and black mud mixed with decayed vegetable matter gathered from the bottoms and sides of stagnant pools and tanks.

There is an ever increasing demand for land, and, in Improvements in spite of the unusual amount of labour required to bring fresh fields under cultivation, reclamation is steadily proceeding under the tenures known as *nayāddādi* and *jaisāsan*. The proportion of uncultivated waste is still high, but it is estimated that during the decade ending in 1901-02 there was an increase of 60 per cent. in the area under crops. Little advantage is taken of the provisions of the Land Improvement and Agriculturists' Loans Acts, but during the lean years 1896-98 Rs. 86,000 was advanced under the provisions of these Acts. agricul-
tural
practices.

The local cattle are small, but a larger variety is sometimes obtained by cross-breeding with large *liazāribāgh* bulls. Regular pasture grounds are rare, but sufficient paddy straw is kept in stock by the ryots for fodder during the hot weather months, and after the break of the rains the extensive waste lands of the District afford ample pasturage. Fairs are held annually at Chākultor, south of Parūlia, in September for a month and at Anāra on the Parūlia-Barākar road for about 20 days in April. Cattle.

The surface drainage is rapid and the soil dries up quickly. Irrigation of some kind is thus essential for most crops. There are no canals or other artificial water-courses, but there is a very large number of tanks and *dhars*. The latter are reservoirs, often of considerable size, constructed by running a dam across a ravine or dip, thereby holding up the natural surface drainage.

The fields below the dam are kept continually moist by the percolation of the water.

Forests.

There are two small protected forests, but no revenue is derived from them. The predominant tree is *sal* (*Shorea robusta*). The principal minor jungle products are lac, catechu, *salai* grass, and tasar silk cocoons. Lac rearing forms the occupation of a large section of the population. The best variety is produced on *Assam* trees (*Schleichera trifluga*), and inferior qualities on *ber* (*Zizyphus jujuba*) and *palās* (*Butea frondosa*). The chief edible jungle products are the flowers of the *mahul* (*Bassia latifolia*) and the fruits of the *ber* and *singhara* (*Trapa bispinosa*).

Minerals.

The most important mineral in Mánbhūm is coal, which is mined on a large scale in the Gobindpur sub-division. The Jherriá coal-field occupies an area of about 180 square miles, and a portion of the Rāniganj-Barākar field also extends into the District. Coal had long been known to exist in Mánbhūm, but as recently as 1891 only two mines were being worked; with an output of 78,000 tons. The Jherriá field was tapped by the railway in 1894, and the output of coal from the collieries of the District rose from 129,000 tons in that year to 1,281,000 tons in 1905, nearly the whole of the increase coming from the Jherriá field. After a short period of depression in the two following years the industry has grown steadily, and in 1908 as many as 141 collieries were at work, viz., 115 in the Jherriá field and 26 in the Rāniganj with outputs of 2,746,000 tons and 246,000 tons, and giving employment to 28,000 and 3,000 persons respectively. The most important concerns are those of the Barākar Coal Company, Jardine Skinner & Co., the Standard Coal Company, Agabeg Brothers, MacLeod & Co., Turner Morrison & Co., the Rāniganj Coal Association, the Bengal Coal Company and the Bengal-Nāgpur Coal Company.

Steam-power is generally used in the Rāniganj field, but in only 24 collieries in the Jherriá field, where good coal is often found very near the surface and the roof in many instances is of hard stone, and the system of working by means of incline is practicable. Shafts are never of the depths common in most collieries in England, and the mines are consequently free from the danger arising from gas which is so prolific a cause of disaster there; the deepest shaft in the Jherriá field is one of 320 feet belonging to the Bhāgā colliery.

Many of the labourers employed are local residents, but a large number also come from Haccabāgh; they generally belong to the aboriginal tribes or low Hindu castes. The relations between capital and labour appear to be on the whole satisfactory, and as the demand for labour is very great, a colliery manager has every inducement to treat his miners well; they are generally paid by piece work at rates varying from 12 annas to Rs. 1-4 per 100

cubic feet of coal raised, the wages earned usually amounting to 7 or 8 annas a day.

About three-fourths of the coal produced is purchased by big European firms who carry it by rail to Calcutta. A small quantity is used by mills and steam ships there, but by far the greater portion is shipped to Bombay, Karachi, Madras, Penang, Singapore, and other ports. About one-fourth of the output is consumed by different railways and by mills in the Upper Provinces.

A clay ironstone which constitutes a large proportion of the iron-stone shales is especially rich and plentiful in the Rāūganj coal-field, where it is sometimes associated with carbonaceous matter forming a black-band iron ore. Among the gneissose and schistose rocks there are magnetic and titaniferous iron ores. Red hematite occurs in the siliceous fault breccias of the same areas, and laterite iron ores also exist. The rocks on the southern boundary of the District constitute part of the northern edge of the auriferous tract of Chotā Nāgpur. They are traversed by innumerable gold-bearing quartz veins, from which has been derived the alluvial gold obtained in all the rivers that drain the schist area. The Pātākūm prospecting syndicate attempted to work the gold on an extensive scale but failed, and the careful investigation to which the area has been subjected of late years leaves very little hope of extracting the gold at a profit. A vein of argentiferous galena occurs about a mile east of Dhādka, on the south-east of the District. Several small soapstone quarries are worked, and rubble, quartz, *kankar*, sandstone, trap and basalt are also quarried.

Shellac is largely manufactured, especially in the Jhalidā and Balarampur thāna, and 54 factories employing 1,400 hands were at work in 1903-04. The manufacture of *tasar* silk is carried on chiefly in Raghunāthpur thāna, and was formerly an important industry, but in 1903-04 the estimated outturn was only 16,000 yards. Coarse cotton cloths are woven all over the District, and are preferred by the lower classes to the imported machine-made article on account of their superior durability. Brass and bell-metal utensils and rough brass ornaments are also manufactured in several places. Soapstone found in Chāndī thāna is made into cups, images, etc., but the industry is small. An inferior quality of rope is made from *sabai* grass, which grows extensively in the Pātākūm, Bāghmundi, Barābhām and Healā parganas. Cutlery and guns are made at Jhalidā.

The chief exports are coal and coke, and the chief imports salt, rice, gram, pulses, kerosene oil, cotton twist and cotton piece-goods, molasses, sugar and tobacco. Most of the imports come from Calcutta and Burdwan, with the exception of gram, pulses, tobacco and molasses, which come chiefly from Bilār. The coal exported by rail in 1903-04 amounted to over two million tons,

Arts and
manufactures.

Commerce

of which nearly three-quarters were sent to Calcutta and Howrah. The principal trade centres are Purulia, Jhalidā, Ohās, Raghunāthpur, Ohāndil, Ohirkundā, Gobindpur, Mānbazar, Ichāgarh, Barābazar, Dubrā and Nirsā. Most of the external trade is carried on by rail; bullock carts are extensively used for local traffic. The bulk of the trade is carried on by Mārwaris and Gandhabaniks.

Railways
and roads.

The Bengal-Nāgpur Railway traverses the head-quarters sub-division from north-east to south-west. The Jherriā extension of the East Indian Railway with its numerous sidings connects the coal-fields of the Gobindpur sub-division with Asansol and Calcutta, and has been carried on to Bānkurā and Midnapore, intersecting the Bengal-Nāgpur Railway at Adrā station. Another line recently constructed links up Jherriā with Gayā. The District contains (1904) 818 miles of road, of which 682 miles are under the control of the District board and the remainder are Provincial, 69 miles being maintained by the District board and 77 being in charge of the Public Works department. The Provincial roads, of which 119 miles are metalled, include 41 miles of the Grand Trunk road in Gobindpur sub-division, 42 miles of the Purulia-Barākar road and 30 miles of the Purulia-Rānchi road. Of the District board roads 363 miles are metalled, the principal being those from Purulia to Ohāibāsa, Mānbazar and Bānkurā, and from Raghunāthpur to Rānigauj. The District board maintains 6 ferries on the more important roads.

Famine.

The undulating character of the surface and the consequent rapid drainage render the District peculiarly liable to drought, and Mānbhūm suffered during the general famines of 1866, 1874 and 1897. The distress in 1866 was felt over almost the whole District. Rice rose to the fabulously high price of 3½ seers to the rupee in the month of August, and in the affected area as many as 33,296 persons or 6·55 per cent. of the population died from starvation and its indirect effects. In 1874 the north and north-east of the District suffered most. In addition to a cash expenditure of 2·7 lakhs, more than 8,000 tons of grain were distributed by Government, and thus the price of rice never exceeded the rate of 12 seers to the rupee. The famine of 1897 was felt over the greater part of the District, but was most intense in the Gobindpur sub-division. The price of grain was highest in July, when rice sold at 7 seers to the rupee. The total expenditure on relief works amounted to 28 lakhs, and Rs. 42,000 was spent in advances for village works. The aggregate number of persons relieved on works, expressed in terms of one day, was 1,311,569, and 1,456,105 persons received gratuitous relief.

For general administrative purposes the District is divided into 2 sub-divisions, with head-quarters at Purulia and Gomindpur. Subordinate to the Deputy Commissioner at Purulia is a staff

District
sub-
divisions
and staff.

of 5 Deputy Magistrate-Collectors; the sub-divisional officer of Gobindpur is assisted by a sub-deputy collector.

The chief civil court is that of the Judicial Commissioner of Chotā Nāgpur. For the disposal of civil work a Subordinate Judge and 2 Munsifs sit at Purūlia, and a Munsif each at Raghunāthpur and Gobindpur. The Munsif of Raghunāthpur also tries rent suits under Act X of 1859, and exercises the powers of a third class magistrate. Deputy Collectors try rent suits under Act X of 1859 at Purūlia and Gobindpur. The Deputy Commissioner exercises special powers under section 34 of the Criminal Procedure Code. As Additional Sessions Judge of Chotā Nāgpur, the Sessions Judge of Bānkurā tries all sessions cases and criminal appeals arising within Mānbhūm and Singhbhūm; for the disposal of sessions cases he sits at Purūlia, and for the hearing of appeals sometimes at Purūlia and sometimes at Bānkurā. Of late years the District has been notorious for the number of dacoits it shelters, and in 1905 more dacoities were committed than in any other Bengal District. These crimes are confined mainly to the coal-fields and are the work of up-country criminals who congregate there.

At the time of the decennial settlement the smaller chiefs were considered to be independent land-holders and were admitted to separate settlements. Succession to land follows the custom of primogeniture; there has thus been no sub-division of property, and in 1903-04 there were in all only 29 revenue-paying estates with a current demand of Rs. 84,000; of these all but two are permanently settled, the largest being Pānchet with a demand of Rs. 58,000. The permanent settlement was extended to the District at a time when it was unprepared for such a measure, and the assessment is therefore disproportionately light, amounting to only R. 0-1-1 per cultivated acre. Special tenures are the *ghātnālī* and other service tenures, maintenance grants to the younger members of a zamindār's family and *mānkī* and *murāri* tenures, a survival of the aboriginal village system (see KOLMAN). The *ghātnālīs* hold a certain quantity of land on a quit-rent as a remuneration for police duties which they are required to perform on behalf of Government. Other service tenures are those of the *jāgirdārs* in Pānchet, who retain one-third or more of the produce of the villages included in their holdings; *gorail* tenures or grants made to the *gorail* or village messenger, and *lāyālī* grants made to *lāyas* or priests of the aboriginal deities. Petty service, or *chakrān*, grants with no specific name are often made to barbers, potters, washermen, smiths and others performing menial services for their landlords; as a rule, they are given free of rent.

Maintenance tenures granted for the support of the younger members of a rājā's or zamindār's family are of two kinds,

khorpash and *hikimāli*. The latter, which are confined to the Barābhūm and Mānbhūm *parganas*, are grants of land assigned for the maintenance of the *hikim* or second brother and the *kuncār* or third brother of the zamindār for the time being. On the death of the zamindār, the brothers of his successor take up the lands attached to the office of *hikim* or *kuncār* and perform the services in consideration of which those lands are held. A *hikimāli* tenure is thus dependent on the life of the zamindār and not on that of the tenure-holder. But each zamindār, when he succeeds to the estate, is bound to make suitable provision in the form of ordinary *khorpash* grants for the *hikims* who have vacated the *hikimāli* grants derived from their relationship to his predecessor. Such maintenance grants are held during the life of the grantees, and are liable to lapse at their death to the parent estate. The incidence of rental for the whole District is estimated at R. 1-12-3 per cultivated acre; but owing to the fact that land is seldom assessed on measurement, any statement of rates is only an approximation. In Barābhūm the generally accepted rates of rent payable by the cultivator to his landlord are Rs. 4-12-9 per acre of *bahāl* or low-lying rice-land; Rs. 3-9-7 per acre of *kānsli* or moderately high rice-land; Rs. 2-6-5 per acre of *baid* or high-land; R. 1-3-2 per acre of *gorā* or the worst class of land. A substantial cultivating ryot pays about Rs. 2-2-0 for his *bāstā* or homestead land, a non-cultivating ryot R. 1-1-0, and a ryot of the poorer class about 8½ annas. Similar rates prevail in the other *parganas* in the south of the District, but in Pānchet and in other estates in the north they are from 50 to 100 per cent. higher.

The following table shows the collections of land revenue and total revenue, under the principal heads, in thousands of rupees:—

	1880-81.	1890 91.	1900-01.	1903 04.
Land revenue	52	52	50	54
Total revenue	3,07	4,25	6,97	6,91

Local and
municipal
govern-
ment.

Outside the municipalities of PURULIA, JHALIDA and RAIGHU-NATIPUR local affairs are managed by the District board with a subordinate local board at Gobindpur. In 1903-04 its income was Rs. 1,42,000, half of which was derived from rates, and the expenditure was Rs. 1,19,000, including Rs. 74,000 spent on civil works and Rs. 32,000 on education.

Police and
Jails.

The District contains 24 police stations and 3 outposts, and in 1903 the force subordinate to the District Superintendent of Police consisted of 8 inspectors, 50 sub-inspectors, 24 head-constables and 207 constables. In addition, there was a rural

police force of 4,360 *chaukidars*, of whom 1,720 hold service tenures, and 1,972 *ghatwals* of different grades. The District jail at Purulia has accommodation for 276 prisoners and a subsidiary jail at Gobindpur for 32.

The District is very backward in respect of education, and in 1901 only 4·0 per cent. of the population (7·7 males and 0·3 females) could read and write. The number of pupils under instruction increased from 10,503 in 1883 to 15,578 in 1892-93 and to 20,535 in 1900-01, while in 1903-04, 24,751 boys and 2,068 girls were at school, being respectively 25·2 and 2·1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 798, including 26 secondary schools, 761 primary schools and 12 other schools. The expenditure on education was Rs. 1,28,000, of which Rs. 14,000 was met from Provincial funds, Rs. 32,000 from District funds, Rs. 600 from municipal funds and Rs. 51,000 from fees. The chief educational institution is the Purulia Government school.

In 1903 the District contained 8 dispensaries, of which 5 had accommodation for 64 in-door patients. The cases of 41,000 out-patients and 641 in-patients were treated during the year, and 1,023 operations were performed. The expenditure was Rs. 12,600, of which Rs. 800 was met by Government contributions, Rs. 2,000 from local and Rs. 6,100 from municipal funds, and Rs. 5,300 from subscriptions. A leper asylum two miles south-west of Purulia town is managed by the German Evangelical Lutheran Mission. Its grounds cover about 400 acres and it has 509 inmates, including 83 children. Untainted children of leprous parents are received in a special home at some distance from the asylum.

Vaccination is compulsory only in municipal areas. During 1903-04 the number of persons successfully vaccinated was 39,000, or 30·7 per thousand of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvii, 1877; F. B. Bradley-Birt, *Chota Nagpur*, 1903.]

Purulia Sub-division.—Head-quarters sub-division of Manbhūm District, Bengal, lying between 22° 43' and 23° 44' N., and 86° 49' and 86° 54' E., with an area of 3,344 square miles. The sub-division occupies the declivity between the Chota Nagpur plateau and Western Bengal. To the east it merges in the alluvial plains, but to the west and south the country is more broken. This part of the sub-division contains the Bāghmundi and Dalmā ranges of hills, the latter of which separates it from Singhbūm. Its population was 1,024,242 in 1901, compared with 971,894 in 1891, the density being 306 persons to the square mile. It contains 3 towns PURULIA (population 17,291), its head-quarters, JHALIDA (4,877) and RAQHUNATHPUR (4,171) and 4,273 villages.

Gobindpur Sub-division.—Northern sub-division of Mānbhūm District, Bengal, lying between $23^{\circ} 38'$ and $24^{\circ} 4'$ N., and $86^{\circ} 7'$ and $86^{\circ} 50'$ E., with an area of 803 square miles. The sub-division consists of a triangular strip of country between the Dāmodar and Barākar rivers; to the west the land rises to the Chotā Nāgpur plateau, but to the north and east the country is open and consists of a series of rolling downs with a few isolated hills. Its population was 277,122 in 1901, compared with 221,434 in 1891, the density being 345 persons to the square mile. It contains 1,248 villages, one of which, GONINDPUR, is its head-quarters, but no towns. The Jherriā coal-field lies within the sub-division, and the great growth of the population during the decade ending in 1901 is due to the rapid development of the mining industry.

Borām.—Village in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 22'$ N. and $86^{\circ} 8'$ E. It is noteworthy on account of the Jain remains in the neighbourhood, on the right bank of the Kāsai river. Amid heaps of debris and ruins stand three fine brick temples; the tower of the largest rises from a base of 28 feet square to a height of (at present) about 60 feet; the upper portion has fallen, but the proportions in other temples of the same type suggest that the original building must have been about one-third higher than the present ruins. The chamber occupies only 9 square feet; the images have been removed. The bricks of which these temples are made are beautifully fashioned, and appear to have been finished by grinding. In this respect, and in their style of ornament and workmanship, these temples resemble the great Buddhist temple of Buddh Gayā in Bihār. [*Archæological Survey Report*, vol. viii, pp. 184—186.]

Buddhpur.—Village in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $22^{\circ} 58'$ N. and $86^{\circ} 42'$ E. on the Kāsai river. Population (1901) 160. Extending for 2 miles along the bank are several ruins of what are thought to have been Jain temples. A number of carved slabs of stone are scattered about; and an extensive collection of octagonal head-stones is believed to mark the graves of the early settlers. About 4 miles to the north, at Pakbirā, is a group of temples with a colossal figure, about 9 feet high, supposed to represent one of the Tirthankaras, or deified saints of the Jains.

Charrā.—Village in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 23'$ N. and $86^{\circ} 25'$ E., 4 miles north-east of Purūlia. Population (1901) 1,533. It contains some very old stone temples, called *deuls* or *debalayas*. There were originally 7 temples, but 5 have fallen. Some of them were Jain or Buddhist, and numerous votive *chaityas* with mutilated figures either of Buddha or one of the Jain hierarchs lie in the village, but the greater number of the remains of

sculptures lying about are Brahmanical. According to local tradition these and some large tanks in the vicinity were constructed by Śārāks.

Dalmā.—Principal hill in Mānbhūm District, Bengal, situated in the head-quarters sub-division in $22^{\circ} 53'$ N. and $86^{\circ} 14'$ E., rising to a height of 3,407 feet above sea-level. It has been described as the rival of Parasnāth, but it lacks the bold precipices and commanding peaks of that hill, and is merely a long rolling ridge rising gradually to its highest point. Its slopes are covered with dense forest, but are accessible to beasts of burden. The chief aboriginal tribes living on the hill are the Khariās and Pahāriās.

Dalmī.—Site of ruins in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 4'$ N. and $86^{\circ} 2'$ E. on the Subarnarekhā. The ruins include the remains of a fort and of many brick built temples. They are representative examples of post-Muhammadian brick temples, but many of the bricks and of the carved stone images formerly found here have been carried away by the villagers. An inscribed figure of Aditya is in fine order, and there is also a small figure of a 10-armed Devi.

Gobindpur Village.—Head-quarters of the sub-division of the same name, Mānbhūm District, Bengal, situated in $23^{\circ} 50'$ N. and $86^{\circ} 32'$ E. Population (1901) 1,293. Gobindpur contains the usual sub-divisional offices and a sub-jail with accommodation for 32 prisoners.

Jhalidā.—Town in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 22'$ N. and $85^{\circ} 59'$ E., Population (1901) 4,877. Jhalidā was constituted a municipality in 1888. The average income and expenditure for the decade ending in 1901-02 were Rs. 3,000. In 1903-04 the income was Rs. 3,700, mainly from a tax on persons (or property tax), and the expenditure was Rs. 3,400. Jhalidā is a centre of the lac and cutlery industries.

Palma.—Deserted Jain settlement, situated within a few miles of Purūlia and near the Kāsai river in the head-quarters sub-division of Mānbhūm District, Bengal. The principal temple stands on a mound covered with stone and brick, the debris of buildings. There are several sculptures of nude male figures standing on pedestals and under canopies, with Egyptian headdresses, the arms hanging down straight by their sides, the hands turned in and touching the knees. There can be no doubt that these images represent the Tirthankaras of the Jains.

Pānchet.—Hill in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 37'$ N. and $86^{\circ} 47'$ E., half way between Raghunāthpur and the junction of the Barākar and Dāmodar rivers. It is 3 miles long, stretching from north to south in a long rounded ridge, and has a height of 1,600 feet above

sea-level. A fort containing the ruins of many temples, tanks, etc., was once the main seat of the Raja of Panchet. A large annual gathering takes place at a temple on the side of the hill.

Purulia Town.—Head-quarters of Mānbhūm District, Bengal, situated in $23^{\circ} 20' N.$ and $86^{\circ} 22' E.$ on the Simi-Arasol branch of the Bengal-Nāgpur Railway. Population (1901) 17,291. Purulia was constituted a municipality in 1876. The average income and expenditure for the decade ending in 1903-04 were each Rs. 22,000. In 1903-04 the income was Rs. 27,000, mainly derived from a tax on persons (or property tax), a conservancy rate and receipts from markets, while the expenditure was Rs. 21,000. The town contains the usual public offices, while a large leper asylum is situated in the neighbourhood. The Inspector of schools for Chota Nāgpur Division is stationed here. The jail has accommodation for 278 prisoners, who are employed mainly on oil pressing, aloe pounding, weaving, cane work and gardening.

Raghunāthpur.—Town in the head-quarters sub-division of Mānbhūm District, Bengal, situated in $23^{\circ} 31' N.$ and $86^{\circ} 40' E.$ Population (1901) 4,171. Raghunāthpur was constituted a municipality in 1888. The average income for the decade ending in 1903-04 was Rs. 2,900 and the expenditure Rs. 2,480. In 1903-04 the income and expenditure were Rs. 3,000, the chief source of income being a tax on persons (or property tax). Raghunāthpur is a centre of the *lassar* silk industry.

Singhbhūm.—District in the south-east of the Chota Nāgpur Division of Bengal, lying between $21^{\circ} 58'$ and $22^{\circ} 54' N.$, and $86^{\circ} 0'$ and $86^{\circ} 54' E.$, with an area of 3,891¹ square miles. It is bounded on the north by the Districts of Ranchi and Mānbhūm; on the east by Midnapore; on the south by the Mayūrbhanj and Kōonjhar States and by the Bonai State; and on the west by Ranchi and the Gangpur State. The boundaries follow the crests of the unnamed hill-ranges which wall in the District on every side, save for short distances where they are marked by the Subarnarekha and Baitarani rivers.

Singhbhūm (the land of the Singh family of *Porāhat*) comprises the Government estate of the *KUMHAN* in the south-east, the revenue-paying estate of Dhalbhūm (Dhal, being the zamindār's patronymic) in the east, and the revenue-free estate of *Porāhat* in the west, while the States of *SARAKELA* and *KHARSWAN* lie in the north, wedged in between *Porāhat* and Dhalbhūm. The District forms part of the southern fringe of the Chota Nāgpur plateau, and the western portion is very hilly, especially in the north, where the highest points have an altitude of more than 2,500 feet, and in *Saranda gir* in the south-west;

* The figures, which differ from those shown in the census report of 1901, were supplied by the Surveyor-General.

where the mountains culminate in a grand mass which rises to a height of 3,000 feet. Outlying ranges stretch thence in a north-easterly direction to a point about 7 miles north-west of Chaibāsa. Smaller ranges are frequently met with, chiefly along the northern marches of Saraikelā and Kharsāwan and in the south of Dhalbhūm on the confines of the Mayūrbhanj State, but in general the eastern and east-central parts of the District, although broken and undulating, are comparatively open. The Singhbhūm hills present a broken outline of sharp-backed ridges and conical peaks, which are covered with forest wherever it is protected by the Forest department; elsewhere the trees have been ruthlessly cut and the hill-sides are rapidly becoming bare and rocky. Among the mountains the scenery is often beautiful. The mountains west of Chaibāsa form the water-shed which drains north-eastwards into the SUBARNAREKHĀ and south and west into the BRAHMANI river. The Subarnarekhā, which flows through the whole length of Dhalbhūm, receives on its right bank the Sanjai, which drains Porābāt, Kharsāwan and Saraikelā. The Kodkai rises in Mayūrbhanj State, and with its affluent the Raro, on whose bank Chaibāsa town is situated, drains the north of the Kolhān, and after passing through Saraikelā, joins its waters with the Sanjai. The Kāro and the Koel rivers drain the west of the District, and flow westwards into the Brāhmani river, which they join in the Gāngpur State. The beds of all the rivers are strewn with boulders, which impede navigation, and the banks are generally steep and covered with scrub jungle, but alluvial flats are deposited in some of the reaches where vegetables and tobacco are grown. The Phuljhur river bursts out of the Rānchi District into Singhbhūm in a cascade which forms a pool supposed to be unfathomable, and the subject of various legends; similar pools in the Baītarani river on the borders of Keonjhar are held sacred, and at one about 2 miles from Jaintgarh Brāhmins have established a shrine, where Hindu pilgrims bathe.

The District is occupied almost entirely by the Arohman Geology. group, a vast series of highly altered rocks, consisting of quartzites, quartzitic sandstones, slates of various kinds, sometimes shaly, mica-schists, metamorphic limestones, ribboned ferruginous jaspers, talcoae and chloritic schists, the last passing into potstones, basic volcanic lavas and ash-beds mostly altered to hornblendic schists, greenstones, and epidiorites. East and south of Chaibāsa there is a large outcrop of a massive granitic gneiss resembling that of Bundelkhand and traversed in the same way by huge dykes of basic rocks. Laterite is found in many places. In the east it largely covers the older rocks and is in its turn concealed by alluvium.*

* Memoirs of the Geological Survey of India, vol. xviii, part ii; and Records of the Geological Survey, vol. iii, part iv, and vol. xxi, part ii.

Botany.

Singhbhūm is in the zone of deciduous leaved forest and in the Central India sal tract, with a temperature attaining 115° in the shade, and mountains rising to 3,000 feet with scorched southern slopes and deep damp valleys: its flora contains representatives of dry hot countries with plants characteristic of the moist tracts of Assam. On rocks, often too hot to be touched with the hand, are found *Euphorbia nirelia*, *Sarcostemma*, *Stereulia urens*, *Boerhaavia serrata* and the yellow cotton tree (*Occhlospermum gossypium*), while the ordinary mixed forest of dry slopes is composed of *Anogeisus latifolia*, *Ougeina*, *Odina*, *Chistanthusa collinus*, *Zizyphus xylopyra*, *Duchanania latifolia* and species of *Terminalia* and *Bauhinia*. The sal varies from a scrubby bush to a tree 120 feet high and is often associated with *Otina*, the mahua (*Bassia latifolia*), *Diospyros*, *Symplocos racemosa*, the gum kino tree (*Pterocarpus marsupium*), *Eugenia jambolana* and specially *Wendlandia tinctoria*. Its common associates, *Careya arborea* and *Dillenia pentagyna* are here confined to the valleys, but *Dillenia aurea*, a tree of the Eastern peninsula and sub-Himalayas, is curiously common in places. The flora of the valley includes *Garcinia coeca*, *Lilaea nitida* (Assamese), *Amora Rohituka*, *Sarcococca Indica*, *Gnetum scandens*, *Musa sapientum* and *ornata*, *Lysimachia pedicularis* (Burmeso) and others less interesting. The best represented woody orders are the *Leguminosae*, *Rubiaceae* (including six species of *Gardenia* and *Randia*), *Euphorbiaceae* and *Urticaceae* (mostly figs). Of other orders the grasses number between one and two hundred species, including the sabai grass (*Ischaemum angustifolium*) and spear grass (*Andropogon contortus*) which are most abundant. The *Cyperaceae* number about 50 species, the *Compositae* 50, and the *Acanthaceae* about 11 undershrubs and 25 herbs. The principal bamboo is *Dendrocalamus strictus*, and the other most useful indigenous plants are the mahua (*Bassia latifolia*) and *Dioscorea* for food, *Bauhinia Pahlia* for various purposes, *Acacia* (*Terminalia tomentosa*) for the rearing of silkworms, *Terminalia chebula* for myrabolams, kusum (*Schleichera trifida*) for lac and oil, and sabai grass.

Fauna.

Wild elephants, bison, tigers, panthers, bears, sambar, spotted deer, barking deer, four-horned antelope, wild boars, hyenas and wild dogs are found, but they are becoming scarce, owing to the hunting proclivities of the aborigines, and, with the exception of bears and some of the smaller animals, they are now almost entirely restricted to the reserved forests. Poisonous snakes are numerous. Many men and cattle are killed by wild animals, and ~~spreaded & Re. 70. 2. distributed annually in remials as killing dangerous beasts.~~

Climate and temperature.

During the hot weather months of April, May and June westerly winds from Central India cause high temperature with very low humidity. The mean temperature increases from 81°

in March to 90° in April and 93° in May; the mean maximum from 95° in March to 105° in May, and the mean minimum from 67° to 80°. During these months humidity is not so low in this District as elsewhere in Chotā Nāgpur, though it falls to 60 per cent. in March and 56 per cent. in April. In the cold season the mean temperature is 67° and the mean minimum 53°. The average rainfall for the year is 53 inches, of which 9·2 inches fall in June, 13·4 in July, 12·4 in August and 7·9 in September. The rainfall is heaviest in the west and south-west, but, owing to the mountainous character of the country, it varies much in different localities, and one part of the District may often have good rain when another is suffering from drought.

Thanks mainly to its isolated position the District was never history. invaded by the Mughals or the Marāthās. The northern part was conquered successively by Bhuiyā and Rājput chiefs, but in the south the Hos or Larkā (fighting) Kols successfully maintained their independence against all comers. The Singh family of Porāhāt, whose head was formerly known as the Rājā of Singhbhūm, are Rāthor Rājputs of the Solar race, and it is said that their ancestors were three brothers in the bodyguard of Akbar's general, Mān Singh, who took the part of the Bhuiyās against the Hos and ended by conquering the country for themselves. At one time the Rājā of Singhbhūm owned also the country now included in the States of Saraikeḷā and Kharsāwān, and claimed an unacknowledged suzerainty over the Kolhān, but SARAIKELA and KHARSAWAN, with the dependent maintenance grants of Dugni and Bānkshāhi, were assigned to junior members of the family, and in time the chief of Saraikeḷā became a dangerous rival of the head of the clan.

British relations with the Rājā of Singhbhūm date from 1767, when he made overtures to the Resident at Midnapore asking for protection, but it was not until 1820 that he acknowledged himself a feudatory of the British Government, and agreed to pay a small tribute. He and the other chiefs of his family then pressed on the Political Agent, Major Roughsedge, their claims to supremacy in the Kolhān, asserting that the Hos were their rebellious subjects and urging on Government to force them to return to their allegiance. The Hos denied that they were subject to the chiefs, who were fain to admit that for more than fifty years they had been unable to exercise any control over them; they had made various attempts to subjugate them, but without success, and the Hos had retaliated fiercely, committing great ravages and depopulating entire villages. Major Roughsedge, however, yielding to the Rājās' representations, entered the Kolhān with the avowed object of compelling the Hos to submit to the Rājās who claimed their allegiance. He was

allowed to advance unmolested into the heart of their territory, but while encamped at Ohaiḥāsa an attack was made within sight of the camp by a body of Hos who killed one man and wounded several others. They then moved away towards the hills, but their retreat was cut off by Lieutenant Maitland, who dispersed them with great loss. The whole of the northern Hos then entered into engagements to pay tribute to the Rājā of Singhbhūm, but on leaving the country, Major Roughsedge had to encounter the still fiercer Hos of the south; and after fighting every inch of his way out of Singhbhūm, he left them unsubdued. His departure was immediately followed by a war between the Hos who had submitted and those who had not, and a body of 100 Hindustani Irregulars sent to the assistance of the former was driven out by the latter.

In 1821 a large force was employed to reduce the Hos, and after a month's hostilities, the leaders surrendered and entered into agreements to pay tribute to the Singhbhūm chiefs, to keep the road open and safe and to give up offenders; they also promised that "if they were oppressed by any of the chiefs, they would not resort to arms, but would complain to the officer commanding the troops on the frontier, or to some other competent authority." After a year or two of peace, however, they again became restive, and gradually extended the circle of their depredations. They joined the Nāgpur Kols or Mundās in the rebellion of 1831-32, and Sir Thomas Wilkinson, who was then appointed Agent to the Governor-General for the newly formed non-regulation province of the South-Western Frontier, at once recognized the necessity of a thorough subjugation of the Hos, and at the same time the impolicy and futility of forcing them to submit to the chiefs. He proposed an occupation of Singhbhūm by an adequate force, and suggested that, when the people were thoroughly subdued, they should be placed under the direct management of a British officer, to be stationed at Ohaiḥāsa. These views were accepted; a force under Colonel Richards entered Singhbhūm in November 1836, and within three months all the refractory headmen had submitted. Twenty-three *Ho pirs* or *parganas* were then detached from the States of Porāhāt, Sarāikela and Kharsāwan, and these with four *pirs* taken from Mayūrbhanj were brought under direct management under the name of the Kolhān; and a Principal Assistant to the Governor-General's Agent was placed in charge of the new District, his title being changed to Deputy Commissioner after the passing of Act XX of 1854. There was no further disturbance until 1857, when the Porāhāt-Rājā, owing largely to an unfortunate misunderstanding, rose in rebellion, and a considerable section of the Hos supported him. A tedious and difficult campaign ensued, the rebels taking refuge in the mountains whenever they were driven from the plains; eventually, however

they surrendered (in 1859), and the capture of the Rājā put an end to the disturbances.

Since that year the Hos have given no trouble. Under the judicious management of a succession of officers, these savages have been gradually tamed, softened and civilised, rather than subjugated. The settlement of outsiders who might harass them is not allowed; the management of the estate is carried on through their own headmen; roads have been made; new sources of industrial wealth have been opened out, new crops requiring more careful cultivation introduced, new wants created and supplied; even a desire for education has been engendered, and educated Hos are to be found among the clerks of the Chaibāsa courts. The deposed Rājā of Porāhāt died in exile at Benares in 1890, and the estate, shorn of a number of villages which were given to various persons who had assisted the British in the Mutiny, was restored in 1895 as a revenue-free estate to his son Kumār Narpāt Singh, who has since received the title of Rājā. The present Porāhāt estate contains the rent-free tenures of Kerā and Anandpur and the rent-paying tenures of Bāndgaon and Chainpur.

Dhalbhūm, which has an area of 1,188 square miles, was originally settled with an ancestor of the present zamīndār, because he was the only person vigorous enough to keep in check the robbers and criminals who infested the estate. It was originally part of Midnapore, and when the District of the Jungle Mahals was broken up by Regulation XIII of 1833, it was included, with the majority of the estates belonging to it, in the newly formed District of Mānbhūm; it was transferred to Singhbhūm in 1846, but in 1876 some 45 outlying villages were again made over to Midnapore.

There are no archæological remains of special interest, but ^{Archæo-}there still exist in the south and east of the Kolhān proper, ^{logy.} in the shape of tanks and architectural remains, traces of a people more civilised than the Hos of the present day; the tanks are said to have been made by the Śārāka, who were Jains and of whom better known remains still exist in the Mānbhūm District. A fine tank at Benisāgar is surrounded by the ruins of what must have been a large town.

The enumerated population rose from 318,180 in 1872 to 453,775 in 1881, to 546,488 in 1891 and to 613,579 in 1901. ^{The} ^{people} The increase is due in part to the inaccuracy of the earlier censuses; but a great deal of it is real; the climate is healthy and the inhabitants are prolific, and the country has been developed by the opening of the Bengal-Nāgpur Railway; the recorded growth would have been much greater but for the large amount of emigration which takes place, especially from the Kolhān to the tea Districts of Assam and Jalpaiguri, as well as to the Orissa

States. In 1901 the density was 158 to the square mile, the Chaibāsa and Ghatsila thānas having 191 and 190 souls respectively to the square mile, while Manoharpur in the west, where there are extensive forest reserves, had only 40. CHAIBASA, the headquarters, is the only town; the remainder of the population live in 3,150 villages, of which 2,973 have a population of under 500. Females are 29 per thousand in excess of males, and the disproportion appears to be increasing. The Hos marry very late in life owing to the excessive bride-price which is customary. The population is polyglot: of every 100 persons 38 speak Ho, 18 Bengali, and 16 Oriya; Santali and Mundari are also widely spoken. Of the inhabitants 336,088 persons (56 per cent.) are Animists, and 265,144 (43 per cent.) Hindus; one per cent. are Christians and nearly one per cent. Musalmāns.

Their
castes and
occupa-
tions.

The Hos (233,000) constitute 38 per cent. of the population, and with their congeners the Bhumijes (47,000) and Mundās (25,000) account for nearly half of it. Santals number 77,000 and Ahirs 53,000, while the other fractional castes most strongly represented are *Tāntis* or weavers (24,000) and *Kāmārs* or blacksmiths (11,000). Bhumijās number 15,000 and Gonds 6,000. Of the population 77 per cent. are dependent on agriculture and 8 per cent. on industry.

Christian
Missions.

The German Evangelical Lutheran Mission, the Society for the Propagation of the Gospel and the Roman Catholic Mission are making considerable progress; their work is largely educational, but the number of Christians has more than doubled in the last 20 years. In 1901 it was 6,961, of whom 6,618 were native Christians.

General
agricul-
tural con-
ditions.

The country may be divided into three tracts, first the comparatively level plains, then hills alternating with open valleys, and lastly the steep forest-clad mountains. In the last the cultivation was formerly more or less nomadic, the clearances being abandoned after a single crop had been harvested from the virgin soil, but this wasteful system is discouraged, and extensive areas have been formed into forest reserves. The plains are embanked for rice cultivation; while in the intermediate tract the valleys are carefully levelled and grow rice, and the uplands or *gorā* are roughly cultivated with millets, oilseeds and occasionally rice. The best lands are those at the bottom of the valleys which are swampy, and either naturally or artificially irrigated. These are called *berā* lands and yield a rich crop of winter rice, occasionally followed by linseed, pulses or barley. The higher ~~unembanked lands are known as 'hill' and grow early rice.~~ The best uplands grow an annual crop, but inferior lands are fit for cultivation only once in four or five years.

Principal
crops.

In 1903-04 the cultivated area was estimated at 1,280 square miles; 932 square miles were culturable waste and 1,240 square

miles were under Government forest. Rice is the principal crop and occupies nearly three-quarters of the cultivated area; rather more than half of it is winter rice. Oilseeds, principally rape and mustard, and *sorgu* account for 8 per cent. and maize for 6 per cent. of the cultivated area, while 20 per cent. is covered by pulses, 2 per cent. by *marrā*, and one per cent. each by millets and cotton.

Cultivation is extending rapidly, especially near the railway, but the system of tillage is very primitive, and shows no sign of improvement. Very little advantage is taken of the Loans Acts. Improvements in agricultural practice.

Though pasturage is ample, the cattle are poor, and the Hos take no interest in improving the breed. Cattle.

The ordinary method of irrigation is to throw an embankment across the line of drainage, thereby holding up the water, which is used for watering the crops at a lower level by means of artificial channels and percolation. In the Kolhān Government estate there are 1,000 reservoirs of this kind, a quarter of which have been constructed by Government, and it is estimated that in the District as a whole a tenth of the cultivated area is irrigated in this way. Irrigation.

More than half the District is still more or less under forest. In the Kolhān 520 square miles and in Porāhāt 196 square miles have been reserved under the Forest Act; the reserves in the latter tract are managed by the Forest department for the proprietor's benefit. Besides this, 212 square miles of protected forest exist in the Kolhān estate and similar forests in Porāhāt, though these have not yet been defined. The Dhalbhūm forests, which are also fairly extensive, are managed by the proprietor without the intervention of the Forest department. The principal tree is the *sal*, which is very valuable owing to the hardness of its timber and the size of the beams which the larger specimens yield. The principal minor products are lac, beeswax, *chob*, *myrabolams* and *sabai* grass, which is used for paper manufacture and also, locally, as a fibre. The total receipts of the Forest department in 1903-04 were Rs. 84,000, and the expenditure was Rs. 57,000. The expenditure was swelled by the cost of working plans and of the roads which are being constructed in order to facilitate the extraction of timber. More than a third of the income is derived from the sale of *sabai* grass.

The rocks of Singhbhūm contain a number of auriferous quartz veins, by the disintegration of which is produced alluvial gold, found in the beds of some of the streams. Of late years the District has been repeatedly examined by experts, but the proportion of gold in the numerous reefs examined and in the alluvium was found to be too low for profitable working. Copper ores exist in many places from the confines of Rānchi to those Minerals.

of Midnapore. The principal form is copper glance which is often altered to red copper oxide, and this in turn to malachite and native copper. In ancient times these ores were extensively worked, but modern attempts to resume their extraction have hitherto proved unsuccessful. Iron ore is frequently found on the surface, usually on hill slopes, and is worked in places. Limestone occurs in the form of the nodular accretions called *kankar*, and is used not only for local purposes but is also collected and burnt for export to places along the railway.

Manufactures.

A little coarse cotton cloth is woven and soap-stone bowls and plates are made.

Commerce.

The chief exports are *ad*, paddy and rice, pulses, oilseeds, stick-lac, iron, *tasar*-silk cocoons, hides and *sebai* grass, and the imports, salt, cotton-yarn, piece-goods, tobacco, brass utensils, sugar, kerosene oil, coal and coke. Since the opening of the railway trade has considerably increased, and large quantities of timber are now exported from the forests of the District and of the adjoining Native States.

Railways and roads.

The Bengal-Nagpur Railway traverses the District from east to west and is connected with the East Indian Railway by the Sini-Asansol branch. The roads from Chaibasa to Chakradharpur and from Chakradharpur towards Ranchi, about 50 miles, are maintained from Provincial funds; some 437 miles of road are maintained by the road cess committee, and 127 miles of village tracks from the funds of the Kolhān Government estate.

Famine.

The District has never been very seriously affected by famine; there was, however, general distress in 1866 when relief was given, and in 1900 the pinch of scarcity was again felt. In all seasons, and especially in years of deficient crops, the aboriginal inhabitants rely greatly on the numerous edible fruits and roots found in the forests.

Administration.

There are no sub-divisions. The District is administered by a Deputy Commissioner, stationed at Chaibasa, who is assisted by 3 Deputy Magistrate-Collectors. A Deputy Conservator of Forests is also stationed at Chaibasa.

Civil and criminal justice.

The Judicial Commissioner of Chotā Nagpur is District Judge for Singhbhum. The Deputy Commissioner has the powers of a Subordinate Judge, but the Sub-Judge of Mānbhūm exercises concurrent jurisdiction, and all contested cases are transferred to his file. A Deputy Collector exercises the power of a Munsif, and a Munsif from Mānbhūm visits the District to dispose of civil work from Dhalbhūm, where alone the ordinary Code of Civil Procedure is in force. Criminal appeals from magistrates of the first class and sessions cases are heard by an Assistant Sessions Judge whose head-quarters are at Bānkura. The Deputy Commissioner exercises powers under section 34 of the Criminal Procedure Code; in his political capacity he hears appeals from the

orders of the chiefs of Saraikeḷā and Kharsāwān, and he is also an Additional Sessions Judge for those States. Singhbhūm is now the most criminal District in Chotā Nāgpur as regards the number of crimes committed, but the latter are rarely of a heinous character; thefts and cattle stealing are very common.

Dhalbhūm was permanently settled in 1800 for Rs. 4,267 per annum, plus a police contribution of Rs. 498. Porāhāt is a revenue-free estate, but pays Rs. 2,100 as a police contribution. This estate, including its dependences of Anandpur, Kurā, Bāndgaon and Chainpur, has recently been surveyed and settled. The average rate of rent fixed at this settlement was about 8½ annas per acre; in some parts it exceeded a rupce, but the general rate was brought down by the low rents levied in the wilder parts of the estate. The Kolhān Government estate was first settled in 1837 at a rate of 8 annas for every plough, and the total assessment amounted to Rs. 8,000. In 1853 this rate was doubled. In 1867 the estate was resettled after measurement for a term of 30 years; only embanked rice land was assessed, at a rate of 12 annas per acre, and the total land revenue demand was fixed at Rs. 65,000. The last settlement was made in 1898. Uplands were assessed, for the first time, at a nominal rate of 2 annas per acre, and outsiders were made to pay double rates, but in other respects no change was made in the rate of assessment. The extension of cultivation, however, had been so great that the gross land revenue demand was raised to Rs. 1,77,000, of which Rs. 49,000 is paid as commission to the *mundās* or village headmen and the *māntīs* or heads of groups of villages. The average area of land held by a ryot is 4½ acres, and, including *gorā*, the average assessment per cultivated acre is 8½ annas.

The following table shows the collections of land revenue and total revenue, under the principal heads, in thousands of rupees:—

	1880-81.	1890-91.	1900-01.	1903-04.
Land revenue	68	70	1,42	1,41
Total revenue	95	1,58	2,89	2,93

Outside the municipality of CHAIBASA, local affairs are managed by the road cess committee. This expends Rs. 18,000, mainly on roads; its income is derived from a Government grant of Rs. 10,000 and from cesses.

The District contains 5 police stations and 3 out-posts, and the force under the control of the District Superintendent.

of Police numbers an inspector, 12 sub-inspectors, 15 head-constables and 155 constables. There is a rural police of 1,323 men, of whom about half are regular *chaukidars* appointed under Bengal Act V of 1887, and the rest (all in Dhalbhum) are *ghatials*, who are remunerated by service lands. In the Kolhan there is no regular police, but the *indhis* and *munds* exercise police authority and report to a special inspector, who himself investigates important cases. The District jail at Chaibasa has accommodation for 230 prisoners.

Education. Education is very backward, and in 1901 only 2·5 per cent. of the population (4·8 males and 0·3 females) could read and write. The number of pupils under instruction increased from about 8,500 in 1882-83 to 15,655 in 1892-93. The numbers declined to 13,469 in 1900-01, but it rose again in 1903-04, when 15,165 boys and 1,171 girls were at school, being respectively 33·4 and 3·6 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 440, including 15 secondary schools, 410 primary schools and 15 other schools. The expenditure on education was Rs. 64,000, of which Rs. 38,000 was met from Provincial funds, Rs. 7,000 from fees and the remainder from endowments, subscriptions and other sources.

Medical. In 1903 the District contained 2 dispensaries, of which one had accommodation for 14 in-door patients; the cases of 3,600 out-patients and 154 in-patients were treated, and 179 operations were performed. The expenditure was Rs. 2,700, of which Rs. 700 was met by Government contributions, Rs. 1,400 from municipal funds and Rs. 600 from subscriptions.

Vaccination. Vaccination is compulsory only within Chaibasa municipality. In the whole District the number of persons successfully vaccinated in 1903-04 was 19,000, or 31·7 per thousand of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvii, 1877; J. A. Oravem, *Final report on the settlement of the Kolhan Government Estate*, Calcutta, 1898; F. B. Bradley-Birt, *Ohela Nagpur*, 1903.]

Kolhan.—Government estate in Singhbhum District, Bengal; lying between 21° 58' and 22° 43' N., and 85° 21' and 86° 3' E., with an area of 1,955 square miles. The Kolhan is a low plateau, varying in elevation from 750 feet above sea-level in the neighbourhood of Chaibasa to upwards of 1,000 feet in the south. On the north, east and south, the country is for the greater part open and gently undulating; it is covered with numerous prosperous villages and is well cultivated, the depressions between the ridges being invariably sown with rice and some portion of the uplands with cereals, pulses or oilseeds. In the south-east the surface is very rocky and covered with jungle; and in the west

and south-west are mountainous tracts thickly covered with jungle and very sparsely inhabited. The villages here are mere hamlets scattered on the hill slopes, and an area of 529 square miles has been formed into forest reserves.

The bulk of the inhabitants are Hos, and British relations with them date from 1820. At that time the tract was a refuge for fugitive offenders from Ohotā Nāgpur, and plundering excursions were frequently made by the Hos into the neighbouring territories. They thus became a thorn in the side of the Rājā of Porāhāt and of the other chiefs in the north of Singhbhum. The British Government, wishing to put an end to the plundering excursions, formed relations with the Rājā of Porāhāt and assisted him and the Sarāikēlā and Kharsāwān chiefs in bringing the Hos into submission. The chiefs, however, were unable to keep them in order, and in 1837 the British Government resolved to take their territories under its direct control. Colonel Richards entered their country with a strong force and secured their submission, after which 23 *Ho pirs* or *parganas* were detached from the control of the Singhbhum chiefs and 4 from Mayūrbhanj and formed into the Kolhān Government estate. There was no further trouble until 1857, when the Hos joined the mutinous Rājā of Porāhāt and a long and troublesome campaign took place, which terminated with the surrender of the Rājā in 1859. The indigenous village-system of the Kols, based upon a federal union of villages under a single divisional head-man, which is gradually dying out elsewhere in Ohotā Nāgpur, still survives in this tract. The whole estate is divided into groups of from 5 to 20 villages. Each village has its own *mundā* or headman, all of whom are subject to the authority of the *mānki* or divisional headman. Every *mundā* is responsible for the payment of the revenue, and for the detection and arrest of criminals in his village, to the *mānki*, who is in his turn responsible to Government. For acting as revenue collectors, the *mānkis* receive a commission of 10 per cent. and the *mundās* 18 per cent. of the revenue which passes through their hands. Besides these duties, the *mānkis* and *mundās*, each in his degree, have certain informal powers to decide village disputes and questions of tribal usage. Persons other than Hos are not allowed to settle in the estate without the permission of the Deputy Commissioner. The last settlement was effected in 1897, when the gross rental was fixed at Rs. 1,77,000, subject to a deduction of Rs. 49,000 on account of commission to *mānkis*, *mundās* and *tahsildārs* or village accountants. A uniform rate of 12 annas per acre was charged for embanked rice cultivation and 2 annas for uplands. New *dikkus* or non-Hos were assessed at double these rates. Of the total area 525 square miles were cultivated, 450 square miles were culturable, and 219 square miles unculturable waste; 212 square miles were protected forest, 529

square miles reserved forest, and 20 square miles *lakhiraj*. Chaibāsa, the head-quarters station of Singhbhum District, which lies within the estate, is assessed under a separate settlement. [J. A. Craven, *Final report on the Settlement of the Kolhan Government Estate*, Calcutta, 1898.]

Porāhāt.—Estate in the north-west of Singhbhum District, Bengal, lying between $22^{\circ} 15'$ and $22^{\circ} 54'$ N., and $85^{\circ} 5'$ and $85^{\circ} 46'$ E., with a total area of 813 square miles, or 614 square miles if its dependancies be excluded. It is for the most part hilly and is largely covered with forest. A fairly open belt of country runs from the north-east to the south-west; this has been opened up by the Bengal-Nagpur Railway and is healthier and more extensively cultivated than the remainder of the estate.

In former times the whole of Singhbhum proper was ruled by a family of Rāthor Rājputs claiming descent from an officer of Rājā Mān Singh's army which was sent to Bengal at the time of Daud Khān's rebellion. The States of Saraikelā and Kharsāwān were cut out of the original State for junior members of the Rājā's family, and the chief of Saraikelā gradually extended his power and dominions until he became a serious rival to the head of the family, who was now known as the Rājā of Porāhāt. The country was saved by its rocky boundaries and sterile soil from conquest by the Marāthās, and was still independent when, in 1818, Rājā Ghanasyām Singh Dēo tendered his allegiance to the British Government. His chief objects were to secure a recognition of his supremacy over the Rājās of Saraikelā and Kharsāwān and to obtain aid in reducing the refractory tribe of Larkā Kols or Hos. The British Government disallowed his claim to supremacy over his kinsmen of Saraikelā and Kharsāwān, but accepted merely a nominal tribute of Rs. 101, and refrained from interfering in any way with the internal administration of the State. An engagement embodying these conditions was taken from him in 1820. It was intended that similar agreements should be entered into by the chiefs of Saraikelā and Kharsāwān, but the matter appears to have been overlooked, and those chiefs have never paid tribute, though they have frequently been called upon to furnish contingents of armed men to aid in suppressing disturbances. The Porāhāt family gradually sank into poverty, and in 1837 the Rājā received a pension of Rs. 600 as a compassionate allowance, in compensation for any losses he might have sustained in consequence of our assumption of the direct management of the Kolhan. In 1857 Arjun Singh, who was then Rājā, after delivering up to Government the Chaibāsa mutineers, rebelled himself. He was captured and deported to Benares, and his State was confiscated. Some portions of it were given to the chiefs of Saraikelā and Kharsāwān and one or two other persons who had helped the Government during the Mutiny, and the rest, on Arjun Singh's

death, was regranted in 1895 to his son Narpāt Singh "to be held by him and his lineal male heirs according to the custom of lineal primogeniture (the eldest male of eldest branch being preferred) as an inalienable and impartible revenue-free zamindari." Anandpur and Kerā were formerly *kharpashas* or maintenance grants made by the Rājā of Porāhāt to junior members of the family, and their holders paid quit-rents to him; these were remitted by Government after the Mutiny, and Narpāt Singh has now no right to receive rents from or to interfere with them, but he has a reversionary right of succession in the event of extinction of male heirs. Bāndgaon and Chainpur are under-tenures, the rent of which has been fixed in perpetuity. The forests of the Porāhāt estate are managed for the Rājā's benefit by the Forest department.

The estate (excluding the dependencies) is divided into 10 groups of villages or *pirs*. Two of these, which lie in the more open part of the country, are known as the *Sadant pirs* and the remainder as the *Kolhān pirs*. The estate has recently been resettled for 15 years from 1903. In Porāhāt proper 159 square miles are cultivated, and 73 square miles are cultivable waste, 38 square miles are unculturable, and 244 square miles are under forest. The chief crop is rice, but some millets and pulses are also grown, especially in the more hilly *Kolhān pirs*. The rates for the best rice land vary from R. 0-12-7 per acre in the *Kolhān* to R. 1-0-2 in the *Sadant pirs*, and the total rental fixed at the settlement was Rs. 38,000 rising to Rs. 42,000 after 5 years.

Chaubāsa.—Head-quarters of Singhbhum District, Bengal, situated in 22° 33' N. and 85° 49' E., on rising ground overlooking the right bank of the river Raro. Population (1901) 8,663. Chaubāsa was constituted a municipality in 1875. The average income for the decade ending in 1901-02 was Rs. 8,000 and the expenditure Rs. 7,000. In 1903-04 the income was Rs. 12,000, mainly derived from a tax on houses and lands, a conservancy rate and a tax on vehicles, while the expenditure was Rs. 10,000. The town lies within the Kolhān Government estate. It contains the usual public offices; the District jail has accommodation for 230 prisoners, who are employed on oil pressing, cloth, *dari* and carpet weaving, and *sabai* string making.

Chakradharpur.—Village in Singhbhum District, Bengal, situated in 22° 41' N. and 85° 37' E. on the Bengal-Nāgpur Railway, 194 miles from Calcutta. Population (1901) 102,608. It is an important railway centre.

Saranda.—Hill range in the extreme south-west corner of Singhbhum District, Bengal, lying between 22° 1' and 22° 28' N., and 85° 0' and 85° 26' E., bordering on Gāngpur State. It consists of a mass of mountains, rising to the height of 3,600

feet; the population inhabiting this region is scattered over a few poor hamlets nestling in deep valleys, and belongs for the most part to the Ho and other aboriginal tribes.

Cross-references (for Imperial Gazetteer only).

Dorunda.—Cantonment at Rānchi District, Bengal. *See* RANCHI TOWN.

Giridih.—Sub-division and town in Hazāribagh District, Bengal. *See* GIRIDIH.

Govindpur.—Sub-division and village in Mānbhūm District, Bengal. *See* GOVINDPUR.

Jharia.—Coal-field in Mānbhūm District, Bengal. *See* MANBHUM.

Jheria.—Coal-field in Mānbhūm District, Bengal. *See* MANBHUM.

Pachet.—Hill in Mānbhūm District, Bengal. *See* PACHET.

Singbhūm.—District in Bengal. *See* SINGBHUM.

